DOCUMENT RESUME

ED 466 707 HE 035 087

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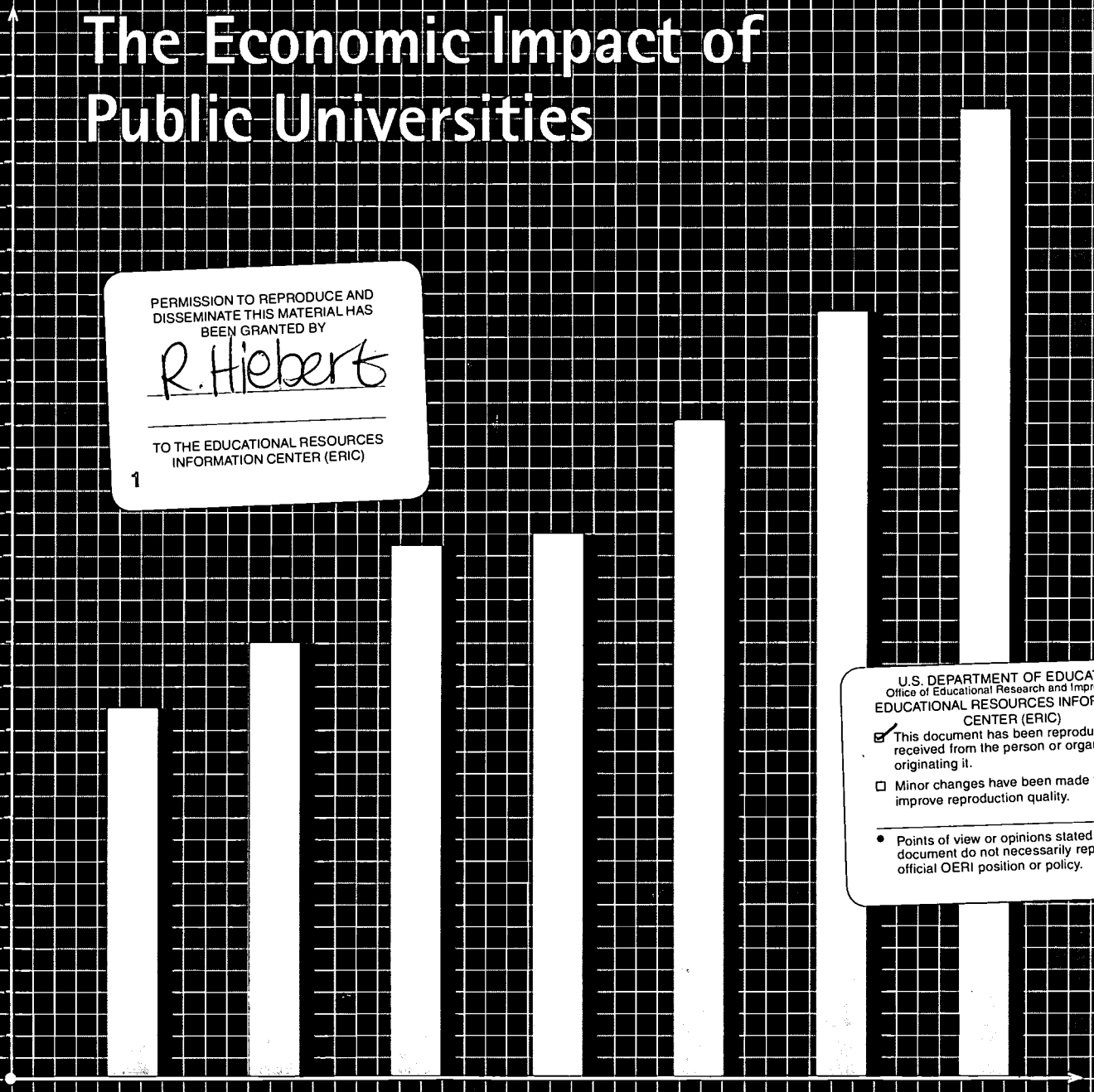
TITLE	Shaping the Future: The Economic Impact of Public Universities.
INSTITUTION	National Association of State Universities and Land Grant Colleges, Washington, DC.
PUB DATE	2001-08-00
NOTE	65p.; Prepared by the Office of Public Affairs.
AVAILABLE FROM	For full text: http://www.nasulgc.org/publications/publications.asp.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC03 Plus Postage.
DESCRIPTORS	Cost Effectiveness; Economic Factors; *Economic Impact; Higher Education; *Public Colleges; Surveys

ABSTRACT

Both sections of this report are based on information supplied by members of the National Association of State Universities and Land Grant Colleges (NASULGC) in response to a questionnaire sent out in the summer of 2000. NASULGC sent the survey to the office of institutional research at each member campus and system. Responses were received from 96 member institutions and 10 university systems. Many institutions sent their most recent economic impact reports and other information to supplement their questionnaire responses. The report makes no attempt to compare the impact of individual institutions or to arrive at cumulative figures about the total economic impact of the responding institutions because different criteria were used to calculate the direct and indirect economic effects of their operations. Data clearly indicate that state-supported institutions of higher education remain powerful engines for economic stability and growth. The average return on every $1 of state money invested in a NASULGC institution is $5. The mean annual institutional spending is $284 million, and some institutions' budgets reach a billion dollars or more. Fore very $100 spent by a member institution, its employees, visitors, and students spend another $138 of their personal funds. The mean number of jobs at NASULGC member institutions was found to be 6,562 (not including part-time student employees). The economic payoffs from college graduates and the research revenue and spending are also noted. Part 2 contains highlights of the reports from member institutions. (Contains 20 figures.) (SLD)

Shaping the Future

The Economic Impact of Public Universities



National Association of State Universities and Land-Grant Colleges

Shaping the Future

The Economic Impact of Public Universities

National Association of State Universities and Land-Grant Colleges
Office of Public Affairs
August 2001

Both sections of this report, Part I—Summary of Responses to Questionnaire and Part II—Campus and System Highlights, are based on information supplied by NASULGC member campuses and systems in response to a questionnaire mailed in the summer of 2000. NASULGC sent the survey questionnaire to the office of institutional research at each member campus and system, and also provided informational copies of the questionnaire to the president or chancellor, chief communications officer, and chief technology-transfer official at each campus. Electronic versions of the questionnaire also were made available on request, and the deadline for responses was extended after the initial mailing. The last data were submitted in October 2000.

Many institutions sent their most recent economic-impact reports and other information to supplement the data they provided in the questionnaire. Follow-up queries were made to individual respondents when necessary to obtain as complete information as possible. Throughout this report, the bulk of the data provided were for fiscal 2000 or fiscal 1999, although in a few cases the data pertain to fiscal years 1998, 1997, or 1996. Because data from the latter years made up a very small proportion of the information provided, such data are not presented separately in the graphs in the report. **For additional information or questions about the numbers for specific institutions, please contact the university or university system directly.**

The report makes no attempt to compare the impact of individual institutions or to arrive at cumulative figures about the total economic impact of the responding institutions, because universities, university systems, and, in some cases, states use different criteria for calculating the direct and indirect economic effects of their operations. Further, because of differences in size of institutions, wide variations exist in the numbers reported. And, particularly in the area of technology transfer, the scope of activities varies considerably. Some universities can document hundreds of companies and thousands of jobs resulting, over many years, from research, intellectual property, and other university contributions. Other universities that just recently have started business incubators and similar entities can point to far fewer companies and jobs resulting from their efforts. Thus no average or "total" would fairly reflect the contributions of individual respondents.

The data analysis in this report was done by Cathy Henderson. For additional copies of the report, please email requests to: pubs@nasulgc.org

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Introduction

ECONOMIC-IMPACT STUDIES attempt to summarize the measurable effects of educational institutions on local and state economies. The value-added benefits of public universities are not confined, of course, to economic tabulations. The cultural, intellectual, and social impacts of our state universities also are far-reaching and well documented. Nonetheless, the economic effects of public universities on their regions are considerable, and these effects play an increasing role in states' calculations of the value of public investment in higher education and in states' attempts to stabilize and enhance their economies.

An institution's economic impact takes many forms. University faculty lend their expertise to area companies, government agencies, and non-profit organizations. Increasingly, they collaborate directly with businesses large and small to commercialize products and processes developed in research, using a variety of technology-transfer models. Some faculty members are setting up companies themselves to commercialize the knowledge they've developed, with universities taking an equity interest in the companies or benefiting financially through some other arrangement.

In a 1998 report, the Association of University Technology Managers said that such small businesses were "the principal commercializing partners for university technologies" and noted that the companies were a boon to local economic growth because the majority locate near the institution that produced the knowledge they are using. And the National Governors Association said in a recent report, "During a thirty-year period, universities have increased the volume of their research nearly ten-fold, and the volume of their formal technology transfer through patenting and licensing has more than doubled in the past six years." It concluded, "Universities can play a major role in economic development, and university-industry technology transfer can be a stimulant, precursor, or complement to building a high-skills, high-wage state economy."

New graduates also are becoming entrepreneurs and setting up companies in the towns and cities where they attended college, knowing they can find well-educated employees there to help staff their fledgling enterprises. More importantly, a significant proportion of all public university graduates stay in the regions where they attended college and become part of the educated, highly skilled workforces in their states. Economists say that such human capital plays a crucial role in a region's economic growth and stability.

Graduates' increased lifetime earnings and educational levels also generate demand for more-sophisticated products and services. Census Bureau figures, analyzed by the Center for Policy Analysis at the American Council on Education, show nearly a $1 million lifetime

difference in the earnings of people with a bachelor's degree ($2,225,657) versus those with just a high-school diploma ($1,268,111). Graduates' increased earnings also mean they typically pay more state and local taxes than workers without degrees. Those tax dollars, plus the taxes paid by the employees, visitors, and students at universities, provide millions of dollars annually to state and local coffers.

NASULGC universities also attract many dollars from outside their states in the forms of federal research grants and contracts, foundation grants, federal student aid, and tuition and fees from out-of-state students. These revenues are particularly important because they represent funds that otherwise would not be part of a state's economy. Although there is no standard, uniform way that states and state university systems calculate all the direct and indirect economic benefits that public universities provide, many institutions are becoming increasingly focused and sophisticated about accounting for the impacts they make beyond the campus, often using "multipliers" of economic impact developed by the U.S. Commerce Department's Bureau of Economic Analysis. Some states also are demonstrating an increased focus on universities' impact by mandating that each public university campus complete an economic-impact study according to prescribed criteria. Although it is impossible to quantify all the various benefits of a university's presence in a state, it is important to remind public officials and taxpayers of the return on their investment in public higher education, particularly during periods of economic uncertainty.

This report summarizes the third in a series of economic-impact surveys conducted by the National Association of State Universities and Land-Grant Colleges. In the summer and fall of 2000, NASULGC surveyed its members to gather data concerning their impact on state and local economies, achieving a 50-percent response rate. Eighty percent of U.S. states and territories are represented in the results, which include, for the first time, data on NASULGC members' technology-transfer activities. The following summary analysis is based on data from 96 member institutions. In addition, 10 reports were received from member university systems. Highlights of the responses from both systems and member campuses are included in Part II of the survey results.

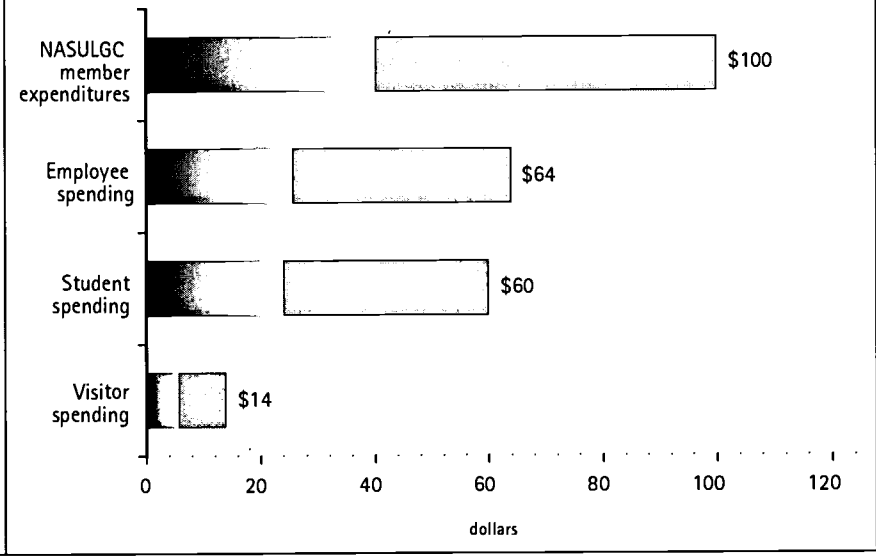
Executive Summary

THE 2000 ECONOMIC-IMPACT SURVEY, like NASULGC's earlier ones, found that states' investments in public universities generate significant jobs, additional spending, and increased tax revenues for local and regional economies. The economic benefits take many different forms. But the data clearly demonstrate that state-supported universities remain powerful engines for economic stability and growth: **The average return on every $1 of state money invested in a NASULGC institution is $5.**

NASULGC universities spend hundreds of millions of dollars each year, making them major economic players in the cities and towns in which they are located. **The mean annual institutional spending reported, including for equipment, maintenance, and capital improvements, is $284 million.** Some institutions' budgets reach a billion dollars or more.

Another telling statistic derived from the survey: **For every $100 spent directly by a NASULGC member institution, its employees, visitors, and students spent another $138 of their personal funds—employees $64, students $60, and visitors $14.** This compares with a total of $88 in additional spending—employees $46, students $38, and visitors $4—estimated in the previous NASULGC survey, published in 1997. The increase probably reflects both a real increase in spending during a good economic period and increasingly sophisticated calculations by institutions, particularly of spending by visitors to the campus.

Each $100 Spent by a NASULGC Institution Generated Further Spending by Employees, Students and Visitors, Fiscal 2000 or 1999



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

Institutions also generate major amounts of tax revenue through the state and local taxes paid by their employees, students, and visitors. **The mean tax revenue generated was found to be $60 million annually.**

The institutions also provide significant numbers of jobs in their localities. **The mean number of jobs was found to be 6,562, not including part-time student employees.**

And the institutions generate significant numbers of jobs in their surrounding communities due to the goods and services purchased by people connected with the institutions. **For every job on a public university campus, another 1.6 jobs are generated beyond the campus.**

States' investments in the public institutions also pay off because the majority of graduates remain in the states afterwards to become part of the region's educated workforce. **On average, two out of three graduates of NASULGC institutions remain in their states for a significant period of time after they receive their degrees.**

Public universities attract significant amounts of revenue from outside the state in the form of research grants and contracts. **The mean amount of such sponsored research was $105 million, and many institutions attracted much more.**

NASULGC universities also aid their local economies through helping to commercialize some of the intellectual property developed in their research. This involves working with established companies, helping generate start-up companies based on university work, and aiding entrepreneurs to form businesses. **Sixty-five percent of the responding institutions reported that they have a research park and/or business incubator.**

For more information on these and several other indicators of NASULGC institutions' economic roles, see the full report of the findings that follows, as well as the institution-by-institution highlights in Part II.

PART I

Summary of Responses to Questionnaire

QUESTION: What is the estimated tax revenue generated annually by your university? This estimate should include state and local taxes paid by the university's employees, students and visitors.

FINDING: *The mean tax revenue generated by university employees, students and visitors was about $60 million annually (Figure 1).*

Although the mean tax revenue figure was $60 million, about two-thirds of responding institutions reported generating tax revenues of less than $40 million annually. The wide range of responses to this question, from less than $10 million annually to more than $70 million, largely reflected the differences in size and resources among NASULGC member institutions, as well as local and state tax rates. The response rate to this question was very high, much stronger than it had been in the 1997 NASULGC economic impact survey. This indicates that respondents are becoming more comfortable with calculating this number.

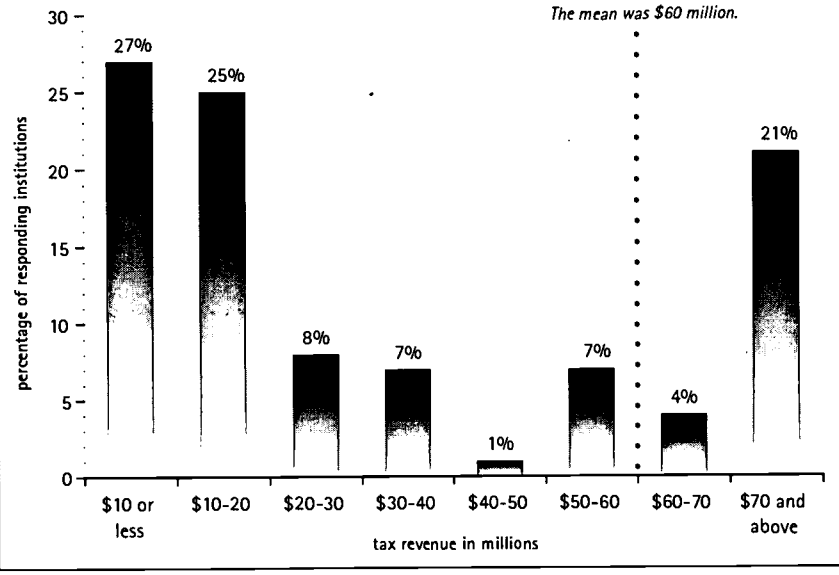
QUESTION: Please estimate annual institutional expenditures. This includes spending on supplies, materials, equipment, acquisition, maintenance, etc., as well as capital improvements, including spending on construction and renovation.

FINDING: *The mean institutional spending was $284 million (Figure 2).*

This figure is very similar to the 1997 number of $277 million. Not unexpectedly,

FIGURE 1

Estimated Annual Tax Revenue Generated by NASULGC Institutions, Fiscal 2000 or 1999 (in Millions)

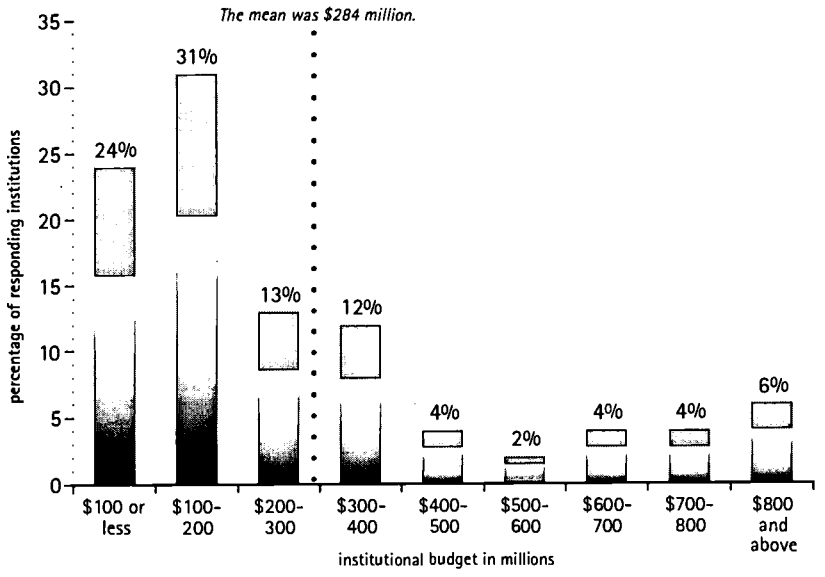


Note:
This is the estimate of state and local taxes paid by the university's employees, students, and visitors. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 2

Estimated Annual Institutional Spending by NASULGC Members, Fiscal 2000 or 1999 (In Millions)



Note:
Estimates for institutional spending include expenditures for supplies, materials, equipment, acquisition, maintenance, etc, as well as capital improvements, such as spending on construction and renovation. The bulk of the data provided were for FY 2000 or FY 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

given the range in size of NASULGC members, the range of estimated institutional expenditures was broad, with 24 percent reporting annual expenditures of $100 million or less, and 10 percent reporting expenditures of $700 million or more. The response rate was very high.

QUESTION: Please estimate annual employee expenditures. This includes the amount of money university employees had available to spend after taxes and other deductions.

FINDING: *The mean figure estimated for after-tax income available to university employees was $181 million (Figure 3).*

The mean reported in the 2000 survey is somewhat higher than the 1997 figure ($181 million versus $128 million). Twenty-one percent of respondents estimated available income at $50 million or less and about a quarter (26 percent) estimated between $50 million and $100 million. Thirteen percent estimated the figure to be $400 million or above. More than nine in ten respondents were able to supply data for this question.

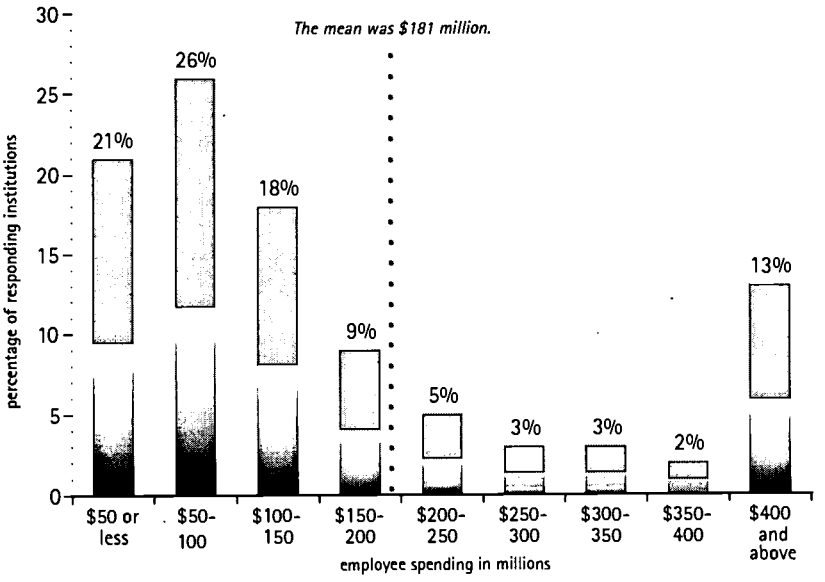
QUESTION: Please estimate annual student expenditures. This includes expenditures for off-campus housing, food, transportation, books, clothing, laundry, and other living expenses.

FINDING: *The mean figure spent by students attending NASULGC institutions was $171 million (Figure 4).*

The mean in 2000 of $171 million was higher than the 1997 figure of $106 million, probably reflecting, in part, institutions' increasing experience in estimating this number. Fifty-seven percent of respondents estimated annual student expenditures to be $150 million or less. Nearly a quarter, 23 percent, estimated spending at $250 million or more. The response rate was very high.

FIGURE 3

Estimates of Annual After-Tax Income Available to Employees at NASULGC Institutions, Fiscal 2000 or 1999 (In Millions)

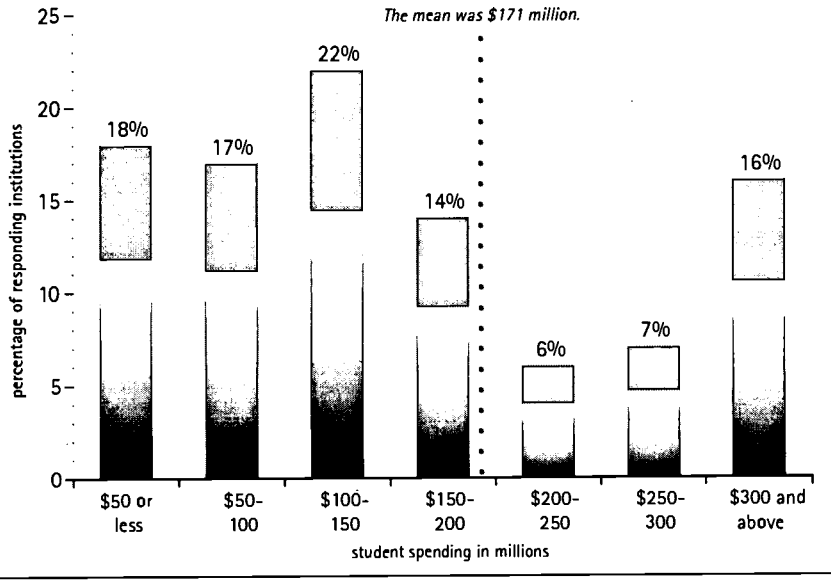


Note:
Estimates exclude taxes and other deductions. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 4

Estimated Annual Spending by Students Attending NASULGC Institutions, Fiscal 2000 or 1999 (In Millions)



Note:
These estimates include expenditures for off-campus housing, food, transportation, books, clothing, laundry, and other living expenses. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

QUESTION: Please estimate annual visitor expenditures. This includes money spent by parents and others who visit the campus for athletic events, conferences, commencements, etc.

FINDING: *The mean amount spent by visitors in 2000 was $41 million (Figure 5).*

The mean in the 2000 NASULGC survey was almost four times higher than the comparable figure from 1997 ($11 million). However, some very large estimates helped to increase the average. For example, in 1997 only about one in 10 responding institutions reported that they had visitor expenditures in excess of $40 million; in the 2000 survey, that proportion had risen to one in four institutions. Still, 53 percent of respondents reported visitor spending of $15 million or under. The response rate to this question was very strong, indicating members' increased attention to this aspect of their economic impact, which can include visitors' attendance at athletic contests, conferences, museums, arts events, and summer programs for non-students.

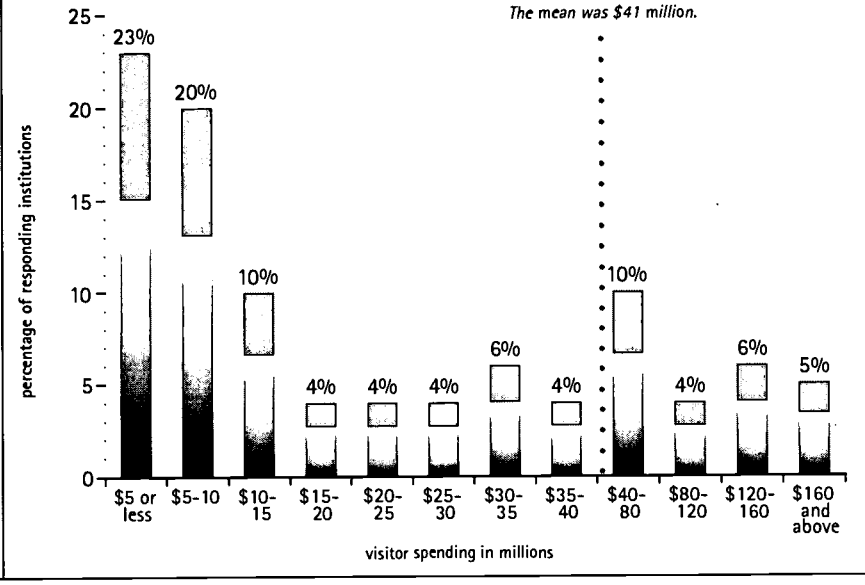
QUESTION: Based on the figures above (plus any other relevant figures), for every $1 your state invests in your institution, how much total spending is generated annually in the state's economy?

FINDING: *Investment in NASULGC institutions generates impressive results; the mean return on every $1 invested was $5 (Figures 6 and 7).*

This finding sums up the far-reaching impact of states' investments in their public universities. The ramifications of each year's annual state appropriation clearly spread well beyond the boundaries of the institution itself. The mean return in the current survey was higher than it had been in 1997 ($5 versus $4). Once again, there was a wide range of answers, but most responses were very specific. The response rate to this question was stronger than it had been previously; many economic-impact reports submitted by the responding institutions to supplement their data included this type of calculation in their highlights.

FIGURE 5

Estimated Annual Spending by Visitors at NASULGC Institutions, Fiscal 2000 or 1999 (In Millions)

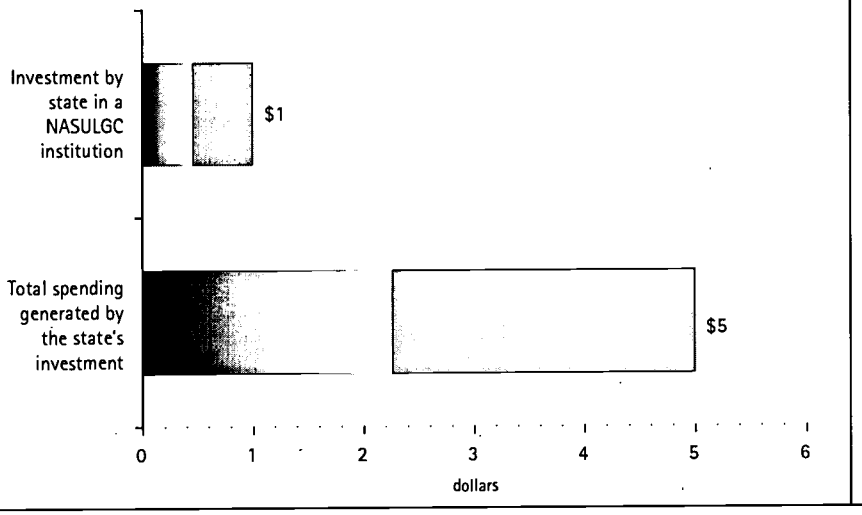


Note:
Estimate includes the money spent by parents and others who visited the campus for athletic events, conferences, commencements, or other special occasions. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 6

For Every State Dollar Invested in a NASULGC Institution, the Estimated Total Spending Generated by That Investment, Fiscal 2000 or 1999

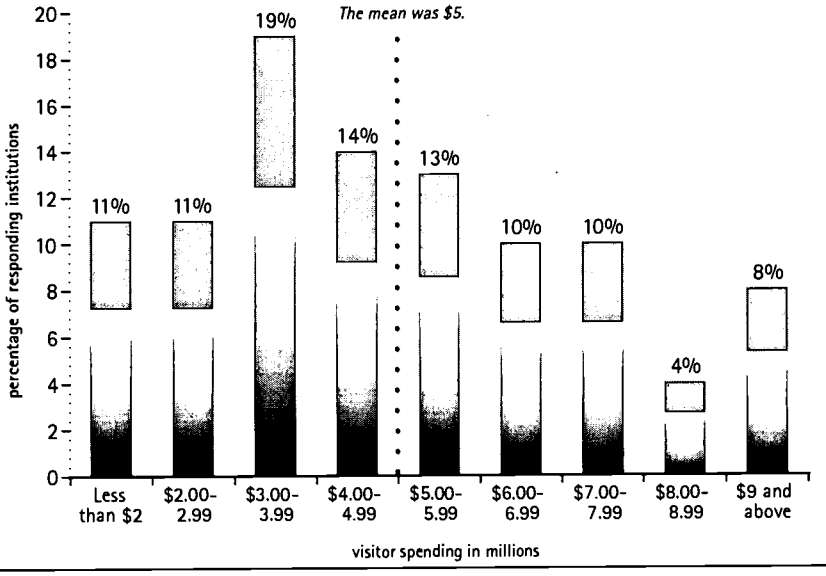


Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 7

Estimated Annual Spending Generated for Every Dollar Invested by States in NASULGC Institutions, Fiscal 2000 or 1999



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

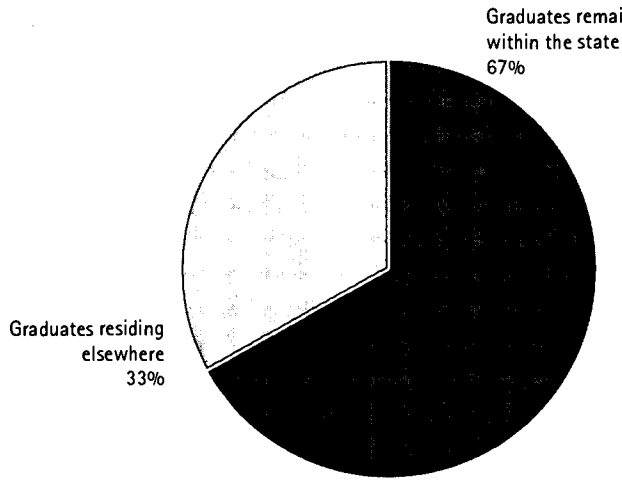
Source:
NASULGC, Economic Impact Survey, 2000.

QUESTION: Please estimate the percentage of graduates who remain in the state for a significant period of time after receiving their degrees.

FINDING: *Two out of every three graduates of NASULGC institutions remain in the state (Figure 8).*

FIGURE 8

Graduates of NASULGC Institutions by Residence Status, Fiscal 2000 or 1999



Note:
The figure represents estimates of the percentages of NASULGC graduates who stayed in the states where they attended college for a significant period of time and those who moved out of the state. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

The average estimate among responding institutions was 67 percent. The majority of respondents (two-thirds) reported that between 50 percent and 90 percent of their graduates remained in their states for a significant period of time. This is an important measure demonstrating the value to a state of the dollars invested in its public institutions. Over all, the bulk of an institution's graduates remain in the sate, paying taxes and becoming part of the state's educated workforce. Three in four institutions were able to supply data for this question.

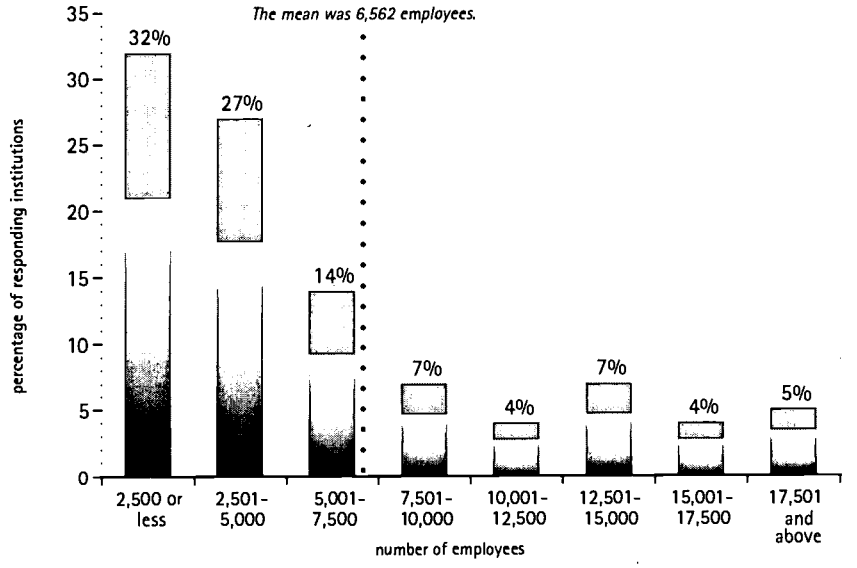
QUESTION: Please estimate the number of jobs created by the university. This would include university employees but exclude part-time student employees.
FINDING: *The mean number of employees at NASULGC institutions was 6,562 (Figure 9).*

This represents direct university employment. The comparable figure from the 1997 NASULGC economic impact survey was 4,914. The sustained employment represented by university jobs directly contributes to a state's tax base and economic stability. Reflecting the range in size of NASULGC institutions, nearly a third (32 percent) of respondents reported employing up to 2,500 people; slightly more than a quarter of respondents (27 percent) employ between 2,500 and 5,000; and a fifth (20 percent) employ 10,000 or more. In addition, some institutions are their areas' largest employers. There was a very high response rate to this question.

QUESTION: Please estimate the number of additional retail, consumer-oriented jobs (such as jobs in non-university stores, banks, etc. catering to university employees and

FIGURE 9

Estimated Number of Employees at NASULGC Institutions, Fiscal 2000 or 1999

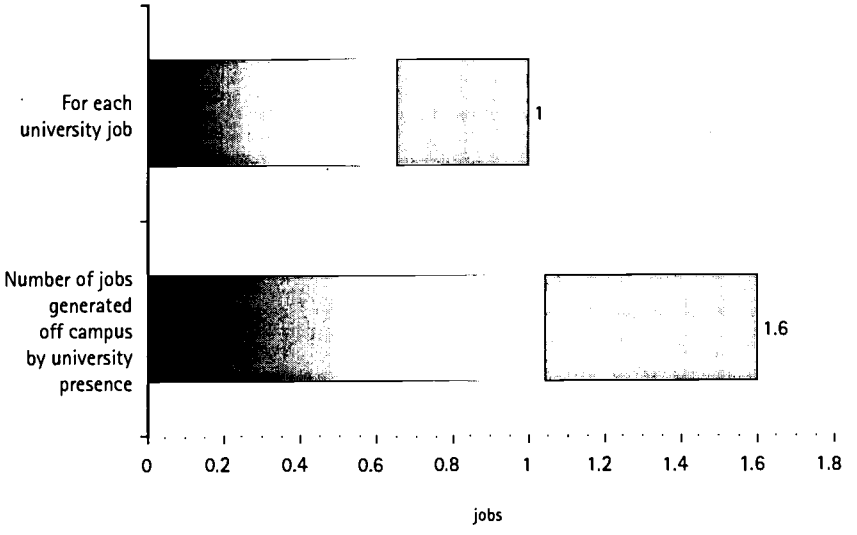


Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 10

For Every Job at a NASULGC University, the Number of Jobs Created Off-Campus by the University's Presence, Fiscal 2000 or 1999



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction of information pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

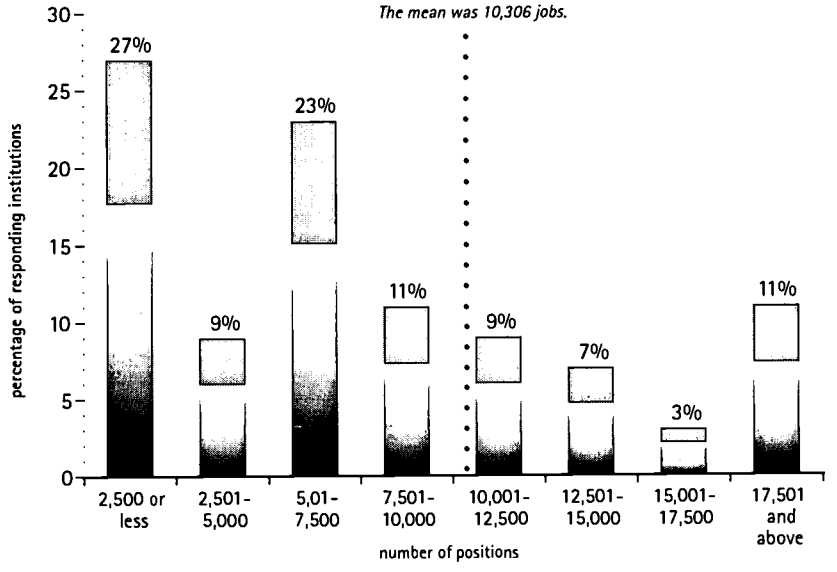
students) generated by the university presence.

FINDING: *Approximately 1.6 jobs in the community and state are created for every one college or university job held (Figure 10).*

The presence of a NASULGC institution benefits the local/state economy significantly through its purchases of goods and services. The mean number of off-campus jobs generated in 2000 was estimated at 10,306 (Figure

FIGURE 11

Estimated Number of Additional Jobs Generated in the Community and State By the Presence of a NASULGC Institution, Fiscal 2000 or 1999

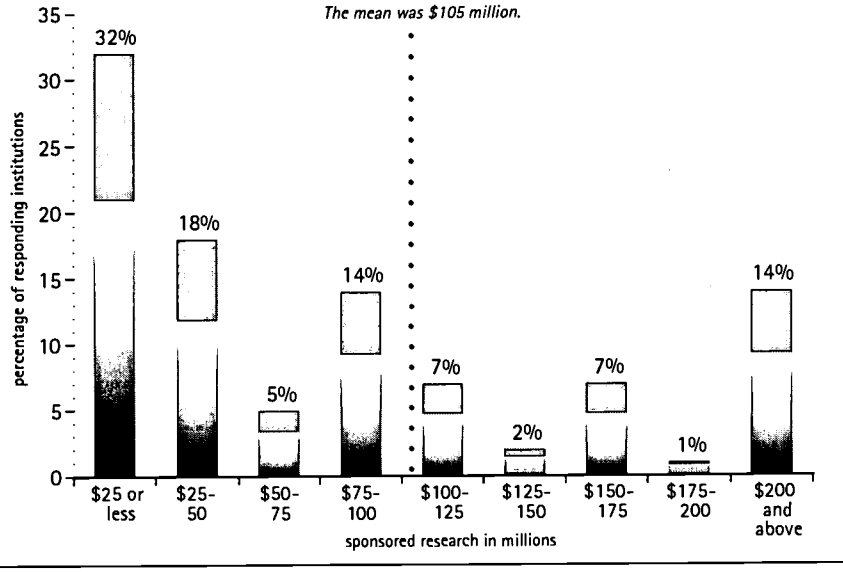


Note:
The bulk of the data provided were for Fiscal 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

FIGURE 12

Annual Level of Sponsored Research at NASULGC Institutions, Fiscal 2000 or 1999 (In Millions)



Note:
These figures represent the total worth of competitive grants and contracts received in the most recent year for which numbers were available. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

11). This estimate is higher than the 1997 average of 7,941, but the relationship between the number of jobs on campus and the number generated in the surrounding community remained the same (1:1.6). Approximately nine out of ten responding institutions answered this question.

QUESTION: Estimate the total worth of competitive grants and contracts (sponsored

research) received by the university, in the most recent year for which data are available.
FINDING: *The mean attributed to sponsored research in 2000 was $105 million (Figure 12).*

Such dollars are emphasized in many economic analyses both because they often represent "new" dollars that enter the state from outside sources such as the federal government and foundations, and because they may lead to new knowledge with the potential for additional businesses, programs, and services within the state. The volume of sponsored research varies significantly across different NASULGC institutions. For example, approximately one in seven responding institutions reported sponsored research to exceed $200 million per year. At the other end of the spectrum, about one-third of the institutions said their annual level of sponsored research was less than $25 million. Nine in ten responding institutions were able to supply data.

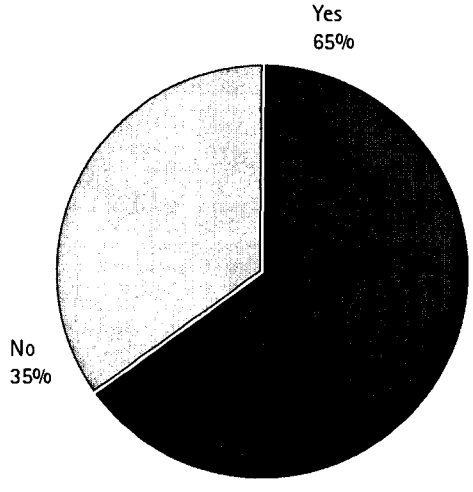
QUESTION: Does your university have a research park and/or business incubator?
FINDING: *Almost two in three NASULGC institutions (65 percent) responded that they have a research park and/or business incubator (Figure 13).*

The trend is not surprising, given universities' increasing need to find new sources of support and states' increasing interest in their public universities' ability to spin off research and use their expertise to help foster local and regional economic development. While some of these enterprises are just a few years old, similar arrangements have existed for decades at some highly research-oriented universities. Ninety percent of respondents answered this question.

QUESTION: Please estimate the number of start-up companies formed by faculty and/or others in your community/state that largely resulted from university-generated intellectual

FIGURE 13

NASULGC Members with Research Parks and/or Business Incubators: Fiscal 2000 or 1999



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

Companies Formed by Faculty and/or Others at NASULGC Institutions During the Past 1–5 Years and 5–10 Years

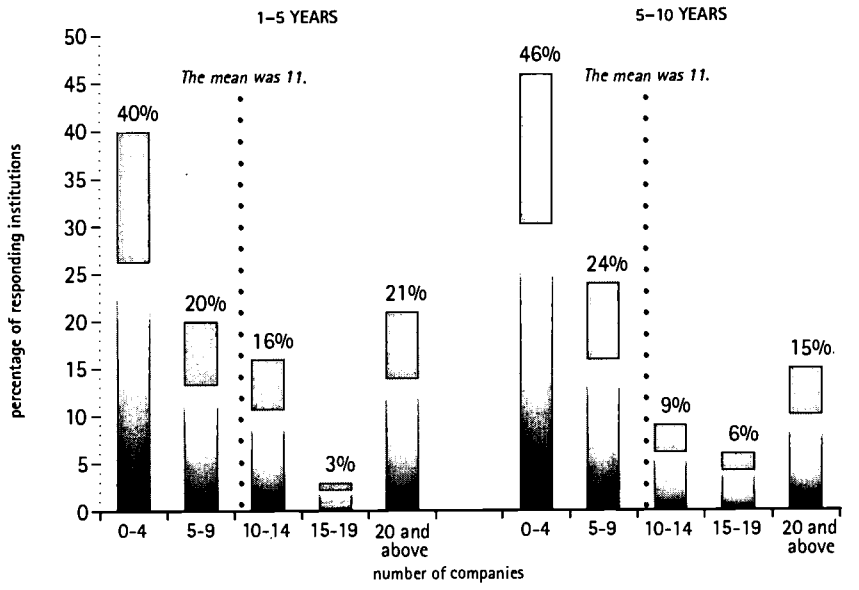


FIGURE 14

Note:
These start-up companies were created by faculty and/or others at NASULGC institutions as a result of university-generated intellectual property. The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

property for two periods of time: the past 1–5 years and the past 5–10 years.

FINDING: *The mean number of start-up companies created because of university-generated intellectual property was 11. This was true for the past 1–5 years, as well as over the past 5–10 years (Figure 14).*

Although the mean figure is relatively low, some research-intensive, entrepreneurial universities that have been involved in such activities longer than the typical institution report more business activity. Over the past five years, one respondent reported the creation of 56 start-ups; over the five-to-ten year period, the largest number of start-ups reported was 68. Those numbers help demonstrate what the long-term economic effects of university research can be in a region, since such companies typically locate close to the institution that produced the knowledge on which they are based. More than three in four respondents provided data.

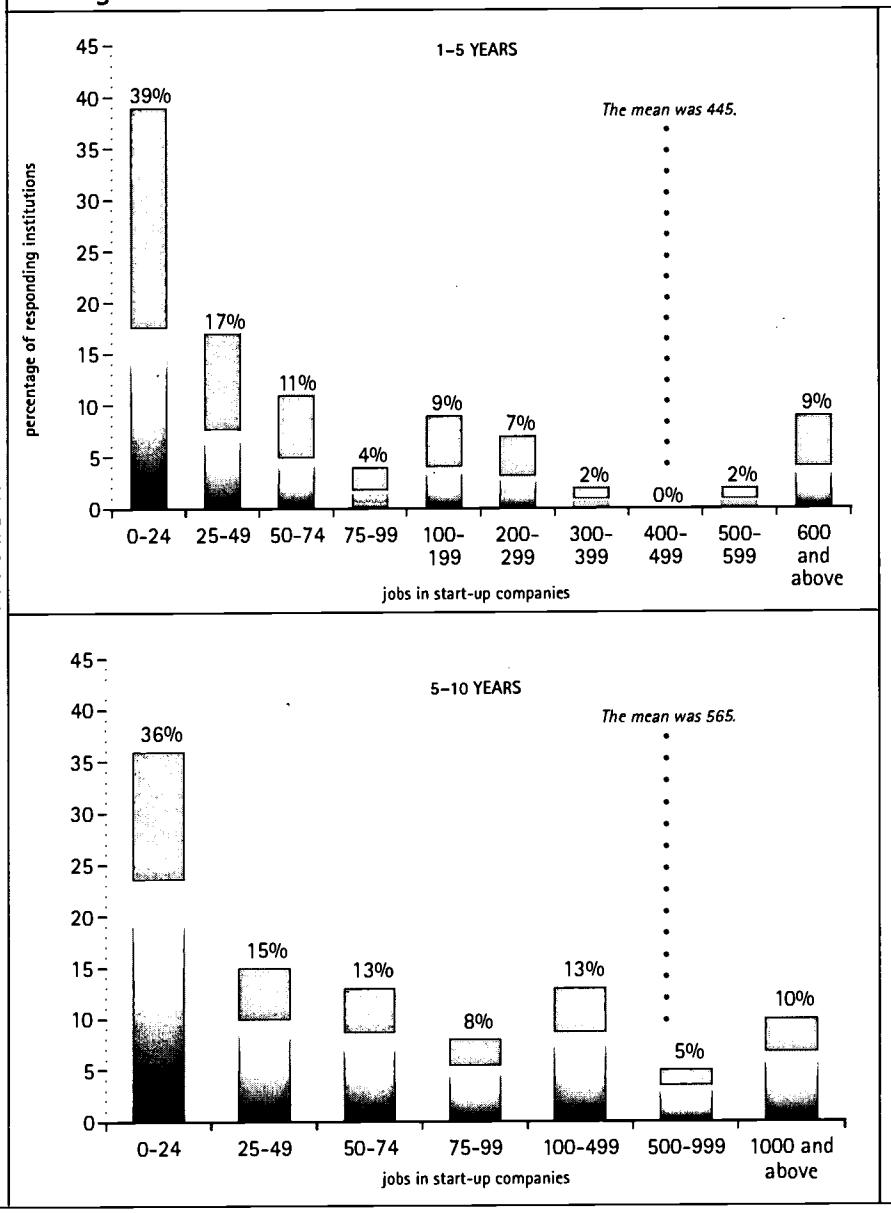
QUESTION: Please estimate the number of jobs in start-up companies formed by faculty and/or others in your community/state that largely resulted from university-developed intellectual property, for two periods of time: the past 1–5 years and the past 5–10 years.

FINDING: *NASULGC institutions reported a mean of 445 jobs created in start-up companies during the past 1–5 years, and a slightly higher number, 565, in companies created during the past five to 10 years. (Figure 15).*

Caution should be used with both of these means (445 and 565) because the tabulations were affected by a very large range of responses. For example, 56 percent of the responding institutions reported that such start-up companies (in both periods of time) employed fewer than 50 people. Many institutions new to such enterprises are just beginning to monitor this number. Again, however, institutions long involved in commercialization of research report much larger numbers

FIGURE 15

Number of Jobs Created by Start-Up Companies Formed by Faculty and/or Others Using University-Generated Intellectual Property, During the Past 1-5 Years and 5-10 Years



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

of jobs created, with the greatest number of jobs over the past five years reported to be 6,600 and the number over the five-to-ten-year period reported to be 13,400. About half the respondents provided data for this question.

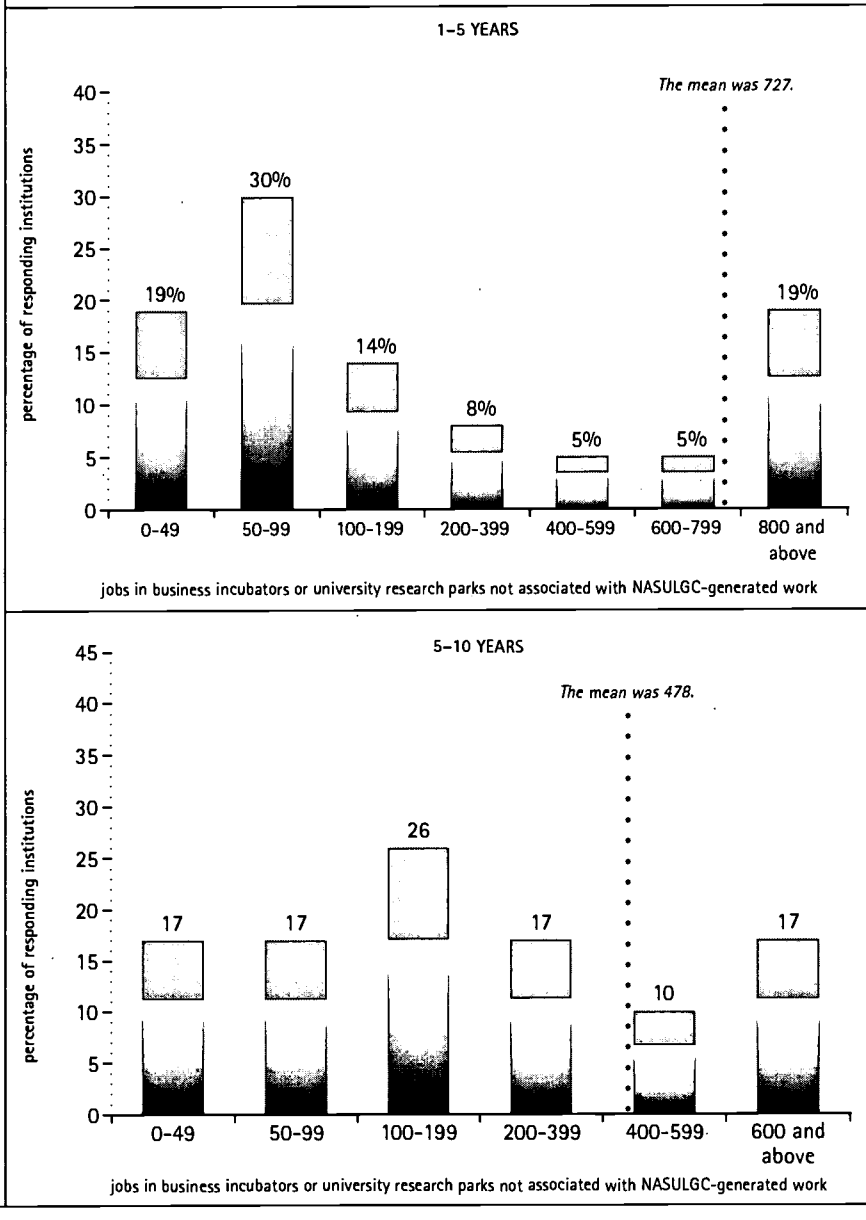
QUESTION: Please estimate the number of jobs generated by business incubators or businesses located in university research parks not relying on university-generated work for two periods of time: the past 1–5 years and the past 5–10 years.

FINDING: *The mean number of such jobs generated by business incubators or businesses located in university research parks was 727 during the past 1–5 years and 478 for the period 5–10 years ago (Figure 16).*

The wide range of data reported by the NASULGC institutions significantly affects the means. For example, although the means are 727 and 478 for the two time periods, in each case slightly more than half of the responding institutions stated that the number of jobs generated was fewer than 150. Other institutions reported more than 2,000 jobs generated over the past five years and more than 4,000 over the past five to 10 years. The data thus indicate universities' potential

FIGURE 16

Jobs Created by Business Incubators in Research Parks That Did Not Rely on University-Generated Work, During the Past 1-5 Years and 5-10 Years



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

for expanding local workforces and enhancing commercial revenues. One in three respondents provided information for this question.

QUESTION: Estimate the number of patents that the university/university foundation/ university researchers applied for in the most recent year for which data are available and for the past five years. Do the same for the number of patents received.

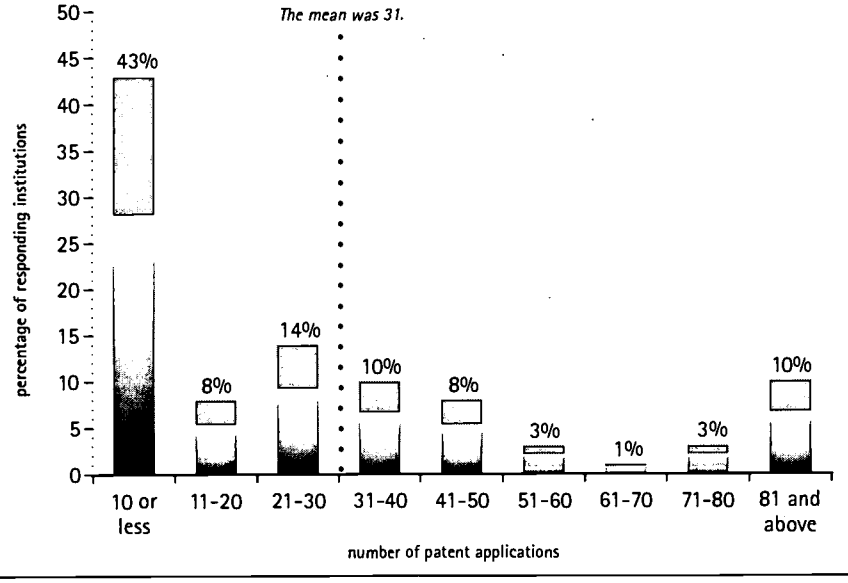
FINDING: *The mean number of patent applications in 1999–2000 was 31, with the mean number accepted being 14. During the period 1995–2000, the mean number of patent applications was 125, with the mean accepted being 59. Thus, on average during the most recent year and over the past five years, university researchers were successful in getting their patents accepted 45 percent and 47 percent of the time (Figures 17, 18, 19).*

Patents are an important step for universities in moving research from the campus to the marketplace, in forming partnerships with business, and in spawning new companies and industries. Again, the responses reflect the range of NASULGC institutions and their expertise in this area, with 43 percent of respondents filing for 10 or fewer patents in 1999 or 2000, and 17 percent filing for more than 50 during the same period. Over the 1995 to 2000 period, while 34 percent of respondents reported applying for 25 or fewer patents, 18 percent reported applying for more than 200. The response rate to this question was strong and the means do not reflect unusually high or low responses. (In some cases, the number of acceptances slightly exceeded the number of applications at a particular institution during the same year because the review process can exceed 12 months.)

QUESTION: Estimate the income the university received from technology-licensing

Number of Patent Applications By NASULGC Institutions, 1999 or 2000

FIGURE 17

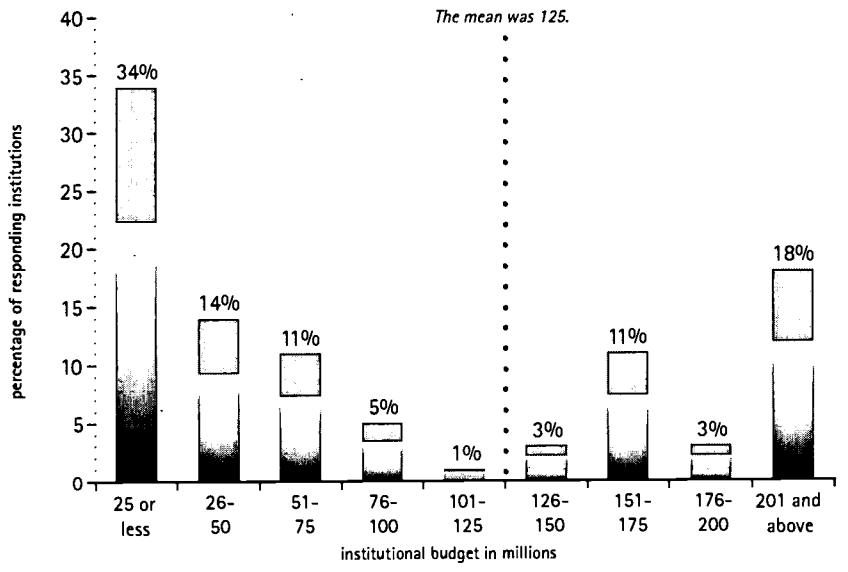


Note: Data provided for the most recent year available.

Source: NASULGC, Economic Impact Survey, 2000.

FIGURE 18

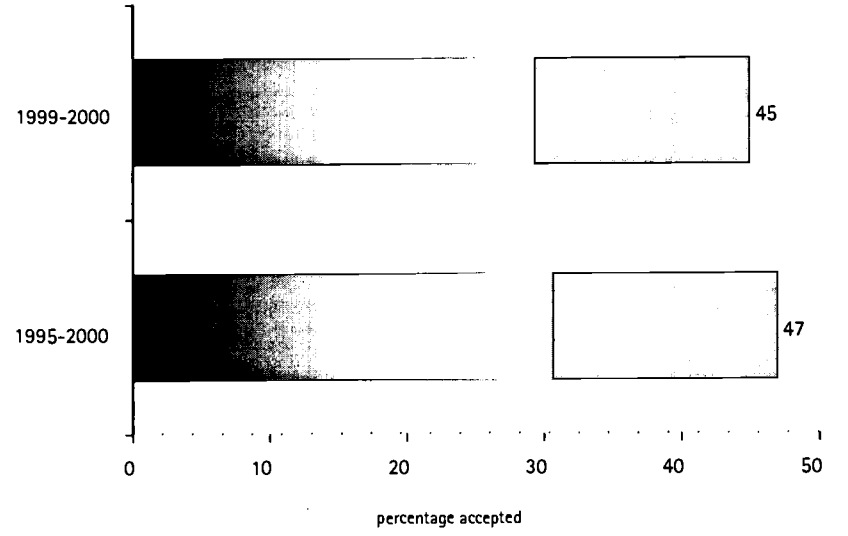
Number of Patent Applications From NASULGC Institutions, 1995–2000



Source:
National Association of State Universities and Land-Grant Colleges, Economic Impact Survey, 2000.

FIGURE 19

Comparison of Acceptance Rates of Patent Applications from NASULGC Institutions: 1999–2000 and 1995–2000



Source:
NASULGC, Economic Impact Survey, 2000.

agreements, royalties, and the like from university-generated intellectual property for the most recent year data are available and for the past five years.

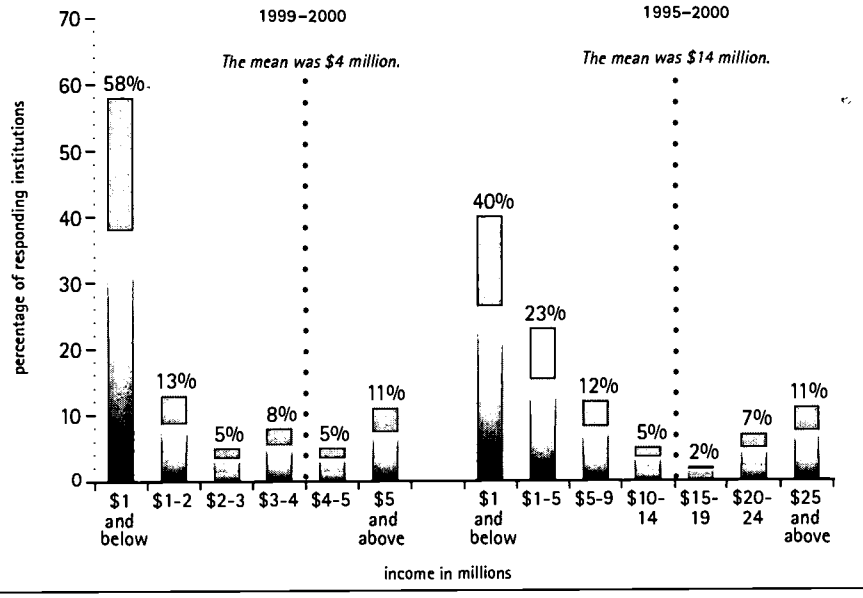
FINDING: *The mean income received from technology-licensing agreements, royalties, and university-generated intellectual property was $4 million for 1999–2000. For the period*

1995–2000, the mean was $14 million (Figure 20).

The range of responses to this question was very broad, so the numbers should be viewed with caution. For example, in 1999–2000, 58 percent of respondents reported receiving less than $1 million per year in gross income; during the period 1995–2000, 40 percent of respondents cited income totaling less than $1 million. However, reflecting the experience of institutions with long-time commitment to, and expertise in, technology transfer, 11 percent of respondents reported revenue of $5 million or above in 1999–2000, with the largest amount reported being $67 million. For the 1995 to 2000 period, 11 percent of respondents reported gross income of $25 million or more, with the largest amount reported being more than $207 million.

FIGURE 20

Income Received from Technology-Licensing Agreements, Royalties, and the Like rom University-Generated Intellectual Property (In Millions), During the Most Recent Year and the Past Five Years



Note:
The bulk of the data provided were for FY 2000 or 1999; a small fraction pertained to FY 1998, 1997 or 1996.

Source:
NASULGC, Economic Impact Survey, 2000.

PART 2

Institutional Highlights

ALABAMA

Alabama A&M University

- The university employs 1,175 people, and its presence generates an additional 2,438 jobs in the area.
- The university generated $6.6 million in tax revenue in 1998–99.
- In the past five years, the university has received $4.8 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 32 companies employing 129 people were created by faculty members and/or other individuals in the area as a result of university-generated intellectual property. In addition, during the past 10 years, 88 jobs were generated by business incubators or businesses located in university research parks that did not rely on university-generated work.
- Additional spending of $36 million during the past 10 years was created by these new companies and business incubators associated with the university. Some $32 million was generated in state and local tax revenues from these initiatives.
- The university spent $46.6 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects added $19 million to the university's budget.
- University employees spent almost $30 million in the local economy, students spent $10 million, and visitors added almost $7 million.
- Two in three graduates remain in Alabama for a significant period of time after receiving their degrees.

Tuskegee University

- Tuskegee employs about 830 people and generates almost $5 million annually in tax revenue.
- In fiscal 1999 Tuskegee received $37 million from competitive grants and contracts.
- Some $43 million has been generated in the local and state economy from business incubators or companies formed by faculty and others from university-developed intellectual property. Almost $5 million was generated in state and local tax revenues from these initiatives.
- In fiscal 1999 Tuskegee spent $48.4 million on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $29 million in the local economy; students spent another $14 million; and visitors added $6.5 million.
- Three in ten graduates remain in Alabama for a significant period of time after graduation.

University of Alabama

- For every state tax dollar spent on the university, the institution generates $4.20 in total spending in the state economy.
- The university employs 4,385 people, and its presence generates an additional 2,202 jobs in the area.
- UA received $32.6 million from competitive grants and contracts in 1998–99.
- The university spent $191 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $101 million in the local economy, students spent $134 million, and visitors added another $57.5 million.
- University researchers were issued 10 patents during the past five years.
- The Alabama International Trade Center, part of the university, is active throughout the state, serving 467 client companies in 57 of Alabama's 63 counties in 1998–99. The center's staff assisted in finalizing $18 million in first-time export sales by these companies; 13 managerial jobs directly related to export sales were created. For more information, see *Alabama International Trade Center Annual Report, 1999.*

- Seven in ten graduates remain within the state after receiving their degrees.

University of Alabama at Birmingham

- UAB employs 13,084 people, and its presence generates an additional 29,762 jobs in the area.
- During the past 10 years, 60 companies employing 2,000 people were created by faculty and/or other individuals in the area as a result of university-developed intellectual property.
- In addition, 2,251 jobs were generated during the past decade by business incubators or businesses located in university research parks that did not rely on university-generated work.
- Additional spending of $498 million was generated by these new companies and business incubators associated with the university during the past five years. $10 million was generated in state and local tax revenues from these initiatives.
- In the past five years, the university has received $7.3 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In the same period, 86 patents were received.
- UAB received almost $208 million from competitive grants and contracts in 1998–99.
- The university spent $204 million in 1998 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $322 million in the local economy, students spent $123.5 million, and visitors added another $35.7 million.
- In 1998, $64.7 million was generated in tax revenue.

ALASKA

University of Alaska System

- For every state tax dollar spent on the University of Alaska system, an additional $4.11 in spending was generated in the state economy.
- The university system employs 5,290 people, and its presence generates an additional 4,290 jobs in the state.
- Expenditures by the university system in fiscal 1999 for supplies, materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation, totaled $225 million.
- In fiscal 1999 employees of the university system spent about $104 million across the state; students spent almost $75 million; and visitors contributed another $3 million to the economy.
- The university system received $68.5 million in competitive grants and contracts in fiscal 1999.
- In the past five years, 8 patents were received.
- Seven in ten graduates remain in Alaska for a significant period of time after graduation.

ARIZONA

Arizona State University

- The total impact of Arizona State University on spending in the state is estimated to be $2.3 billion.
- For every state tax dollar spent on Arizona State University, the institution generates $7.00 total spending in the state economy. In addition, for every $1 the state contributes, another $.60 is attracted from out-of-state sources to help support university teaching, research, and public service programs.
- ASU spent almost $223 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- Sponsored research projects brought in $100 million.
- University employees spent $221.5 million in the local economy, students spent $734.6 million, and visitors spent $29.6 million.
- The university generated $151 million in tax revenue in fiscal 1999.
- In the past five years, the university has received $4.2 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In the same period, 56 patents were received by university researchers.
- The university employs 9,000 people, and its presence generates an additional 12,530 jobs in the area. One job is created for every $8,120 of state appropriations.
- During the past five years, 6 start-up companies were created by faculty and/or other individuals in the area

as a result of university-developed intellectual property.

- Three in five graduates remain in Arizona for a significant period of time after receiving their degrees.

For more information, see *The Economic Impact of Arizona State University, 1999.*

Northern Arizona University

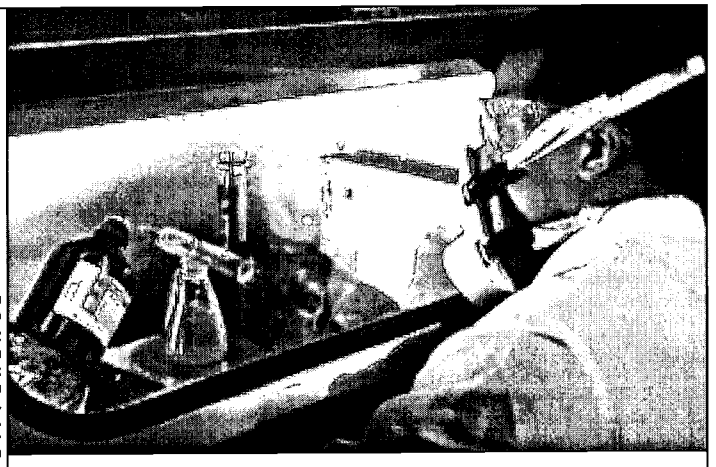
- For every state tax dollar spent on Northern Arizona University, the institution generates $3.33 total spending in the state economy.
- The university employs 3,134 people, and its presence generates an additional 6,286 jobs in the area.
- In fiscal 1999 the university received $23.3 million from competitive grants and contracts.
- The university spent $87 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $80.5 million in the local economy. Students spent $137.5 million, and visitors added another $30 million.

For more information, see *Northern Arizona Economic Data Book, 1999.*

University of Arizona

- The University of Arizona's impact on the local economy (Pima County) is estimated to be $1.9 billion.
- For every dollar of state-appropriated funds, the university generates another $6.31 total spending in the state's economy.
- The university generated $31.6 million in tax revenue in 1997–98.
- Sponsored research projects brought in $345 million. Over the past five years, 60 patents were granted.
- During the past five years, 2 companies employing 30 people were created by faculty and/or others in the area as a result of university-generated intellectual property. In addition, during the same period 5,900 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional spending of $1.3 billion was created by these new companies and business incubators associated with the university during the past five years, and $131.6 million in state and local tax revenues was generated from these initiatives.
- The university received about $2 million in income from technology-licensing agreements and royalties from university-generated intellectual property in the past five years.
- The university/university researchers were granted 60 patents.
- UA employs 13,192 people, and its presence generates an additional 5,947 jobs in the area.
- The university spent $352 million in 1997–98 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.

MAKING A DIFFERENCE



In the past seven years, the **University of Arizona**'s Science and Technology Park has grown from a two-company enterprise with a workforce of about 1,700 employees, to a research park with 30 companies and organizations employing 6,200 people. Because the park is now at 100 percent occupancy, planning for a major expansion is under way. The university estimates that the annual economic contribution of the park to the local and regional economy now approaches $1 billion. Other, more intangible benefits also are generated. Collaborations between the companies and university researchers and graduate students benefit all parties, and promising technologies and medical advances are moved more quickly from the laboratory to economic viability.

- University employees spent $402 million in the local economy, students spent $874 million, and visitors added another $102 million.

For more information, see *Economic Impact of the University of Arizona for Fiscal Year 1997–1998; Impact of the University of Arizona Science and Technology Park on the Economy of Tucson and Pima County, 1999;* and *Economic and Revenue Impact Analysis, 1997–98.*

ARKANSAS

University of Arkansas, Fayetteville

- The university employs 4,000 people, and its presence generates an additional 18,000 jobs in the area.
- During the past ten years, 5 companies employing 25 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 400 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during the same period.
- Additional spending of $1.2 billion was created by these new companies and business incubators associated with the university during the past 10 years, and $2.5 million was generated in state and local tax revenues.
- In the past five years, the university has received $4.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Competitive grants and contracts contributed $41 million in 1998–99.
- In the past five years, 37 patents were received.
- For every state tax dollar spent on the University of Arkansas, the institution generates $8.59 total spending in the state economy.
- The university spent almost $233 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $129.5 million in the local economy, students spent $156 million, and visitors added another $227.4 million.
- The university generated $14 million in tax revenue in 1998–99.
- Slightly more than half of the graduates (55 percent) remain in Arkansas after receiving their degrees.

CALIFORNIA

California State University, Fresno

- The university spent $150.6 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $67 million in the local economy; students contributed another $169.4 million.
- The university generated $3.3 million in tax revenue in 1999–2000.
- Competitive grants and contracts totaled $26.3 million that year.
- During the past five years, 87 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Nine in ten graduates remain in California after receiving their degrees.

San Diego State University

- The university, which employs approximately 3,700 people, spent $115 million in 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $113.7 million in the local economy; visitors contributed almost $1 million.
- The university generated $7 million in tax revenue in 1999–00.
- $105 million was received from sponsored research projects in 2000.
- During the past five years, 7 companies employing 72 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of $2 million was created by these new companies during the past five years, and $400,000 was generated in state and local tax revenues.
- In the past five years, the university has received $340,000 in income from technology-licensing agreements and royalties from university-generated intellectual property. University researchers received eight patents during that period.
- About four in five graduates of SDSU remain in California after receiving their degrees.

San Francisco State University

- San Francisco State University, the fifth largest of the California State University campuses with an estimated budget of almost $181 million in 1998–99, supported $396 million in direct economic activity. The

total economic impact is estimated to be $896 million throughout the region and state.

- SFSU employs 3,414 people, and its presence generates an additional 12,184 jobs in the area.
- The university spent $41 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $143.3 million in the local economy, and students contributed another $195 million.
- The university generated $33.5 million in tax revenue in 1998–99.
- It received $34 million from competitive grants and contracts in 1999–00.
- Nine in ten graduates of SFSU remain in California for a significant period of time after receiving their degrees.

For more information, see *The Economic Impact of San Francisco State University, 1999.*

University of California System

- The total economic impact of the UC system is estimated to be $11.9 billion annually.
- In 1998, UC campuses received 8,095 basic research grants totaling $1.13 billion.
- Approximately 150,640 individuals are employed by the University of California system.
- During the past 10 years, 78 companies were created by faculty and/or others in the state as a result of university-developed intellectual property.
- University researchers were issued 1,057 patents during the past five years, including 300 last year.
- In the past five years, the UC system received $385.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Each of the nine UC campuses has a high-technology cluster near it.
- Approximately 85 percent of the graduates of UC campuses remain within the state after graduation. There are nearly one million living alumni of UC campuses.

For more information, see *In Touch, 2000; UC's Economic Impact Statewide Memo, 1999;* and *A Century of Discovery, UC, 1998–99 Annual Financial Report.*

University of California, Berkeley

- The university spent $1.12 billion in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- UC Berkeley employs 12,510 people, and the institution generated $142 million in tax revenue in 1998–99.
- University employees spent $452 million in the local economy, students spent $313.4 million, and visitors added another $16 million.
- Competitive grants and contracts contributed $432 million in 1999.
- In the past five years, the university has received over $5 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- University researchers were issued 136 patents during the past five years.
- For every state tax dollar spent on UC Berkeley, the institution generates $3.00 total spending in the state economy.
- About three in five graduates remain in California after receiving their degrees.

University of California, San Diego

- During the past 10 years, 150 companies employing 20,000 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of $15 billion was created by these new companies associated with the university during the past decade, and $1.5 billion was generated in state and local tax revenues.
- UC San Diego leveraged the $283.5 million that the state of California contributed to the campus in 1998 into a total income of $1.4 billion, or almost five times the original state investment. Of that total, $810 million was money that the university attracted from outside the region, and this had an overall economic impact of $2.1 billion.
- The university generated $115 million in tax revenue in 1998–99.
- Sponsored research activity totaled $450 million that year.
- In the past five years, the university has received $15 million in income from technology-licensing agreements and royalties from university-generated intellectual property.

MAKING A DIFFERENCE

It's no accident that the **University of California, San Diego** is surrounded by high-tech computer, medical diagnostic, and wireless companies. In fact, more than 145 San Diego companies—with revenues in excess of $2 billion—have been founded by the university's graduates or faculty, or created based on a technology developed on campus. The university's Office of Technology Transfer and Intellectual Property Services works to ensure that innovations developed on campus are transferred to the private sector and made available through licensing arrangements. UC San Diego's scientists and engineers are also actively encouraged to use CONNECT, a formal network of 700 companies that helps them explore business opportunities and gain entrepreneurial expertise. The institution founded the San Diego Science and Technology Council to enhance the region's international competitiveness and to present Southern California's needs and views to national policy makers.

- For every state tax dollar spent on UC San Diego, the institution generates $7.00 total spending in the state economy.
- The university spent $792 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $440 million in the local economy, students spent $275 million, and visitors added another $72 million.
- Four in five graduates remain in California after receiving their degrees.
- The university employs 15,000 people, and its presence generates an additional 102,000 jobs in the area.

For more information, see *Anticipating the Future: Annual Financial Report*, and *The Economic Impact of UC San Diego on the Local, State and National Economy, 1999.*

University of California, Santa Cruz

- The university spent $278.3 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $153.5 million in the local economy, students spent almost $104 million, and visitors added another $18 million.
- The university employs 5,487 people.
- The campus generated $23.1 million in tax revenue in 1997–98.

COLORADO

University of Colorado System

- For every state tax dollar spent on the University of Colorado system, its campuses generate $11.08 total spending in the state economy.
- The university system spent $1.2 billion in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. These direct expenditures translated into over $2.2 billion in incremental Gross State Product (GSP).
- The university system generated $116.2 million in tax revenue in 1999.
- Sponsored research projects brought in $420 million.
- Students spent $360.4 million, and visitors added another $66.8 million.
- The university system employs 20,000 people, and its presence generates an additional 38,000 jobs in the state.
- In the past five years, the system has received $11.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- University researchers were issued 129 patents during the past five years.

For more information, see *A Sound Investment in Colorado, Economic Impact, 2000.*

DELAWARE

University of Delaware

- Expenditures by students, faculty, and staff totaled approximately $300 million during 1999, and the total economic impact within the state was estimated to be $570.6 million.
- Students spent more than $143 million, and employees added another $94.5 million.
- The University of Delaware employs almost 3,400 people, and its presence generates an additional 10,810 jobs in the state.
- The return on the state's investment in UD is approximately three times greater than its initial investment.
- Delaware Technology Park opened in the summer of 2000 and is the state's first public-private research complex. UD set aside 40

acres on the edge of the Newark campus for the park, and the state contributed $6.5 for construction of the first building. Two other postsecondary institutions, Delaware Technical and Community College and Delaware State University, are also involved in the park's development. The park houses 30 businesses, including the DuPont Co.'s advanced materials component. A key partner in the development has been University City Science Center in Philadelphia, a nonprofit corporation owned by 30 academic and scientific institutions stretching from New York City to Washington, DC.

For more information, see *UD's Economic Impact on State Exceeds $570 Million, 2000,* and *Delaware Technology Park Opens Two New Buildings, 2000.*

FLORIDA

Florida Atlantic University

- For every state tax dollar spent on Florida Atlantic University, the institution generates $7.28 total spending in the state economy.
- The university employs 2,086 people, and its presence generates an additional 7,280 jobs in the area.
- The university spent $127 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $111 million in the local economy, students spent $110 million, and visitors added another $3.3 million.
- Sponsored research projects brought in $31 million.
- During the past five years, a start-up company employing 10 people was created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 65 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during this same period.
- Additional spending of $3.9 million was created by new companies formed by faculty and/or others in the area as a result of university-developed intellectual property and business incubators associated with the university during the past five years. Some $650,000 was generated in state and local tax revenues from these initiatives.
- In the past five years, 5 patents were received.
- Almost four in five graduates (78 percent) remain in Florida for a significant period of time after receiving their degrees.

Florida State University

- In the past five years, the university has received $207.4 million in income from technology-licensing agreements and royalties from university-generated intellectual property. University researchers were issued 39 patents during that period.
- The university spent $467.3 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- The university employs 5,753 people. University employees spent $114.4 million in the local economy; students contributed about $300 million; and visitors added $36 million.
- The university generated $51 million in tax revenue in 2000.
- Competitive grants and contracts totaled $101.2 million in 1999.
- About half of the graduates of FSU remain in Florida after receiving their degrees.

University of Central Florida

- During the past decade, 10 companies employing 80 people were created by faculty and/or others in the area as a result of university-developed intellectual property. During the same period, 7,160 jobs were generated by business incubators or businesses located in university research parks that did not rely on university-generated work.
- In the past five years, the university has received almost $153,000 in income from technology-licensing agreements and royalties from university-generated intellectual property. In the same period, 59 patents were received.
- For every state tax dollar spent on the university, the institution generates $3.00 total spending in the state economy.
- The university, which employs 3,523 people, spent $365.4 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $76 million in the local economy, students spent $384 million, and visitors added another $50 million.

- Competitive grants and contracts contributed $52.5 million in 1999–00.
- Four in five graduates remain in Florida after receiving their degrees.

University of Florida

- For every state tax dollar spent on the university, the institution generates $5.30 total spending in the state economy.
- In the past five years, the university has received $95 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the same period, 28 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- 394 patents were accepted during the past five years.
- The university employs 36,858 people, and its presence generates an additional 13,330 jobs.
- University of Florida received $300 million from competitive grants and contracts in 1999–00.
- The university spent $1.3 billion in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $820 million in the local economy, students spent $338 million, and visitors added another $45 million.
- In 1999, $54.7 million in tax revenue was generated.
- More than half of the university's graduates remain in Florida after receiving their degrees.

For more information, see *Economic Impact of the University of Florida on the State of Florida, 2000–01*, which is available at www.ir.ufl.edu/EconomicReport.pdf

University of South Florida

- USF has connections with almost three-quarters of the 50 fastest-growing companies in the Tampa Bay region. The majority of these companies have utilized USF for workforce assistance, contract training programs, internships, employee placement and screening, and distance learning courses. Others have conducted cooperative research, formed ties with the College of Engineering, or worked on product development with the USF Technology Development Center.
- During the past decade, 30 companies employing 335 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 165 jobs were generated by businesses located in university research parks that did not rely on university-generated work.
- Additional spending of $47.5 million was created by these initiatives during the past 10 years, and $9.5 million was generated in state and local tax revenues.
- In the past five years, the university has received over $2.9 million in income from technology-licensing agreements and royalties from university-generated intellectual property. University researchers were issued 68 patents during that period.
- The university employs 9,000 people, and its presence generates an additional 45,000 jobs in the area.
- Sponsored research activity totaled $171.3 million in 1999-00.
- The university spent $821 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $286 million in the local economy, students spent $350 million, and visitors added another $36 million.
- The university generated $84 million in tax revenue in 2000.

MAKING A DIFFERENCE

Over the past decade, more than 50 spin-off companies affiliated with the **University of Florida** have been created, with approximately 80 percent of those companies remaining in the state of Florida. Over that period, the university collected approximately $115 million in royalty and licensing income for the use of its technologies by a wide range of companies, including the makers of the sports drink Gatorade™ and the glaucoma drug Trusopt.™ The funds generated are reinvested in additional research and support services for technology transfer. For instance, the university has created the state's only bio-business incubator, the Martin Biotechnology Development Institute, which is a statewide resource for moving biotechnology to the private sector.

- Nine in ten graduates remain in Florida after receiving their degrees.

For more information, see *1999 "Impact" Report: Economic Activity of the University of South Florida's Outreach Programs; Sunny Skies and Silicon Dreams, USF Magazine, 1999;* and *Florida High Tech Corridor Council, Inc. Annual Report, 1998–1999.*

GEORGIA

University System of Georgia

- In fiscal 1999, the total economic impact of all 34 University System institutions on their local communities was $7.7 billion. This represented an increase of 6.4 percent over the fiscal 1998 figure.
- Of the total $7.7 billion impact, $5.9 billion was generated by the institutions' expenditures and $1.8 billion from spending by students.
- The University System of Georgia added $3.6 billion in labor income (wages and salaries before taxes) to the economies of the regions where its colleges and universities are located.
- The 34 institutions provide a total of almost 100,000 jobs. Approximately 42 percent of these positions are on campus and 58 percent are located off-campus in either the private or public sector. On average, for each job created on campus, 1.4 positions exist off campus because of spending related to the institution.
- For every dollar initially spent by an institution, an extra 56 cents is generated for the local economy.

For more information, see *The Economic Impact of University System of Georgia Institutions on Their Regional Economies in Fiscal Years 1998 and 1999.*

MAKING A DIFFERENCE

The same technologies that landed man on the moon often have broader commercial applications. A technology-transfer center at the **Georgia Institute of Technology** works with NASA to help move space-age innovations such as newly created composite materials, alloys, and specialized computer software to companies that can put them to work here on earth. NASA makes the innovations available for licensing through six regional centers. Georgia Tech houses the Southeast Regional Technology Transfer Center, serving Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee. Some of the technologies NASA has recently made available include lightning-strike detectors, predictive sensor algorithms, thermal gaskets and cable-inspection systems.

Georgia Institute of Technology

- For every state tax dollar spent on the university, the institution generates $5.00 total spending in the state's economy.
- The university employs 5,500 people, and its presence generates an additional 8,000 jobs in the area.
- Georgia Tech's Economic Development Institute offers an array of services to city and county officials, economic developers, entrepreneurs, plant managers and business owners. The Advanced Technology Development Center provides start-up support for new high tech companies including: office space; access to various resources at Georgia Tech; business counseling; contacts with potential investors, accountants and attorneys; and educational programs.
- During the past 10 years, 124 companies employing 5,285 people were created by faculty and/or others in the area as a result of university-developed intellectual property. Some $4.8 billion in revenues were generated by these companies.
- In the past five years, the university has received $11 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, 109 patents were received during that period.
- Georgia Tech spent $381 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other expenditures.
- University employees spent $200 million in the local economy, students spent $117.6 million, and visitors added another $200 million.
- The university generated $13 million in tax revenue in 2000.
- Sponsored research activity totaled $232 million in 2000.
- Half of the graduates remain in the state for a significant period of time after degree completion.

For more information, see *Economic Development Institute, 1999 Annual Report.*

Georgia State University

- The economic impact of GSU was $854 million in fiscal 1999. Of this total, $643 million was generated by the institution's expenditures and $211 million from spending by students.
- Georgia State University added $385 million in labor income (wages and salaries before taxes) to the local economy.
- The university employs 4,904 people, and its presence generates an additional 6,114 jobs in the area.

University of Georgia

- The university has a total employment impact of 19,708 jobs; 8,390 positions were on campus and the remaining 11,318 were generated in the surrounding area.
- The economic impact of the university was $1.5 billion in fiscal 1999. Of this total, $1.2 billion was generated by the institution's expenditures and $300 million from spending by students.
- University of Georgia added $704 million in labor income (wages and taxes before salaries) to the local economy.

HAWAII

University of Hawaii

- The university employs 9,580 people, and its presence generates an additional 19,468 jobs in the area.
- For every state tax dollar spent on the university, the institution generates $2.87 total spending in the state's economy.
- The university spent $274 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other expenditures.
- University employees spent almost $483 million in the local economy, students spent $305.5 million, and visitors added another $72.4 million.
- The university generated $183 million in tax revenue in 1999.
- $206 million was received in 1999 from competitive grants and contracts.
- In the past five years, the university has received about $1.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past five years, 56 patents were received.
- Manoa Innovation Center (MIC) has provided an average of 204 jobs per year during the period 1995–99. State tax revenues from the MIC companies totaled $1,354,000 during that time.
- At least four in five graduates remain in the state for a significant period of time after they complete their degrees.

IDAHO

Idaho State University

- For every state tax dollar spent on the university, the institution generates $7.00 total spending in the Idaho economy.
- The university employs 1,727 individuals, and its presence generates an additional 200 jobs in the area.
- The university spent $44.3 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other expenditures.
- University employees spent almost $40 million in the local economy, students spent $172 million, and visitors added another $16 million.
- The university generated $11.2 million in tax revenue in 1999.
- Sponsored research projects generated $17 million.
- During the past five years, 3 companies employing 30 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 50 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional spending of $2.5 million was created by these new companies and business incubators associated with the university during the past five years. Some $350,000 was generated in state and local tax revenues from these initiatives.
- In the past five years, the university has received $30,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Three in five of the graduates remain in Idaho after receiving their degrees.

ILLINOIS

Northern Illinois University

- For every state tax dollar spent on the university, the institution generates $5.00 total spending in the Illinois economy.

- NIU employs 3,600 people, and its presence generates an additional 8,400 jobs across the state.
- Expenditures by the university in fiscal 2000 for supplies, materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation, totaled $163.4 million.
- In fiscal 1999 university employees spent almost $71 million in the state; students spent $85 million; and visitors contributed another $34 million to the economy.
- The university received $24.6 million from competitive grants and contracts in fiscal 2000.
- The university generated $17 million in tax revenue in FY 2000.
- In the past five years, the university received $85,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- University researchers received 20 patents during the same period.
- Additional spending of $140,000 was created by 10 new companies created by faculty and/or others in the area as a result of university-developed intellectual property during the past 10 years. An estimated $20,000 was generated in state and local tax revenues from these initiatives.
- About six in seven graduates (85 percent) remain in Illinois for a significant period of time after receiving their degrees.

For more information, see *Economic Impact Study of Northern Illinois University Operations and Construction, 1995*, and *Analysis of Return on Investment, 1997*.

Southern Illinois University at Carbondale

- Southern Illinois University at Carbondale has 5,019 employees, and its presence generates an additional 760 local jobs.
- During the past 10 years, 15 companies employing 850 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, during the same period 320 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional spending of $150 million was created by these new companies and business incubators during the past 10 years. Some $4.5 million was generated in state and local tax revenues from these initiatives.
- In the past three years, the university has received about $582,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- For every state tax dollar spent on the university, the institution generates $5.07 total spending in the Illinois economy.
- The university spent $352 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $159 million in the local economy; student expenditures totaled almost $69 million, and visitors contributed over $11.5 million.
- Some $26.5 million was received from sponsored research projects in fiscal 1999.
- The university generated $3.4 million in tax revenue in fiscal 1999.
- About half of the graduates of the university remain in Illinois after receiving their degrees.

For more information, see *Economic Impact of Regional Public Colleges and Universities, 1995*, and *The Economic Impact of Southern Illinois University FY 91, 1993*.

University of Illinois at Urbana-Champaign

- The university received $452 million from competitive grants and contracts in fiscal 2000. The university wins five times more federal research dollars than all other Illinois public universities and colleges combined.
- For every state tax dollar spent on the university, the institution generates $11.00 total spending in the Illinois economy.
- The university generated $1.15 billion in tax revenue in 1999.
- The university employs 29,752 people, and its presence generates an additional 84,600 jobs in the state.
- Expenditures by the university in fiscal 1996 for supplies, materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation, totaled $866 million.

MAKING A DIFFERENCE

People with partial hearing loss often have trouble hearing conversations at social gatherings—even with the use of a hearing aid. This is because they often can't differentiate specific sounds from background noise. Now, a revolutionary new "intelligent" hearing-aid technology that mimics the brain's ability to spatially separate and process sounds has been developed by a team of scientists at the **University of Illinois at Urbana-Champaign**. Their technology allows the wearer to focus on a desired voice while canceling out background noise, even at crowded social gatherings. The scientists recently signed an exclusive licensing agreement with a leading maker of technologically advanced hearing aids to move their technology to commercial availability.

- In the same year, university employees spent about $916.5 million across the state; students spent $582 million; and visitors contributed another $94.6 million to the economy.
- During the past five years, 13 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- During the past five years, 140 patents were received, as well as $24.2 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- The Urbana-Champaign campus is home to the National Center for Supercomputing Application (NCSA), the largest university-based supercomputer in the U.S.
- Two in three graduates remain in Illinois for a significant period of time after graduation.
- On average, a University of Illinois graduate pays the state nearly $98,000 more in sales and income taxes over a lifetime, compared with a high-school graduate.

For more information, see *The Earning Curve; Impact Illinois; Dividends of Technology; Building the Economy; Shaping Society; Always Thinking;* and *Engine of Development.*

INDIANA

Indiana University

- The university employs 6,862 people, and its presence generates an additional 10,000 jobs in the area.
- The university generated $15 million in tax revenue in 1999.
- Indiana University spent $133 million in 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $378 million in the local economy, students spent $334 million, and visitors added another $52 million.
- Sponsored research projects brought in $136 million.
- In the past five years, the university received $7.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property, as well as 32 patents.
- Almost half of the graduates remain in Indiana for a significant period of time after receiving their degrees.

Indiana University-Purdue University Indianapolis

- For every state tax dollar spent on IUPUI, the institution generates $6.00 total spending in the Indiana economy.
- The university employs 1,439 people, and its presence generates an additional 1,598 jobs in the area.
- During the past 10 years, the equivalent of approximately 200 full-time positions were created by business incubators or businesses located in research parks not relying on university-generated work.
- Additional spending of $53 million was created by these businesses during the past decade. An estimated $1.4 million was generated in state and local tax revenues from these initiatives.
- Expenditures by the university in 1999 for supplies,

materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation totaled $218 million.

- In 1999 university employees spent about $57 million across the state; students spent $70.4 million; and visitors contributed another $8 million to the economy.
- Sponsored research activity totaled $11.2 million in 1999.
- The university generated $3.5 million in tax revenue in 1999.
- Three in four graduates remain in Indiana after receiving their degrees.

Purdue University

- The university employs 15,000 individuals, and its presence generates an additional 7,000 jobs in the area.
- During the past 10 years, 12 companies employing 252 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, about 200 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during this same period.
- In the past five years, the university received $8 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the same period, 117 patents were received.
- For every state tax dollar spent on the university, the institution generates $4.00 total spending in the Indiana economy.

MAKING A DIFFERENCE

Indiana University is filling a critical need in helping its state meet the requirements of recently enacted federal legislation. The state of Indiana awarded the university a $234,000 contract to train 1,200 state employees who will be implementing the federal Workforce Investment Act. The statute authorizes one-stop employment, education, and training services for the current and potential workers, including training provided under welfare-to-work initiatives. The Indiana University School of Continuing Studies will partner with both the state and other Indiana public colleges and universities to train the employees carrying out the act.

IOWA

Iowa State University

- For every state tax dollar spent on the university, the institution generates $5.00 total spending in the Iowa economy.
- The university employs 6,202 people, and its presence generates an additional 16,500 jobs in the state.
- The university spent almost $749 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- The campus received $199 million in competitive grants and contracts in fiscal 1999.
- University employees spent $325 million in the local economy, and students contributed almost $210 million.
- The university generated $35 million in tax revenue in fiscal 1999.
- During the past 10 years, 32 companies employing 862 people were created by faculty and/or others in the area as a result of university-
- The university spent $320 million in 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- Competitive grants and contracts contributed $166 million in 1999–00.
- University employees spent $380 million in the local economy, students spent $280 million, and visitors added another $100 million.
- The university generated $21 million in tax revenue in 1999.

developed intellectual property. In addition, during the same period, approximately 1,200 jobs were generated by businesses located in university research parks or business incubators that did not rely on university-generated work.

- In the past five years, the university received about $21 million in income from technology-licensing agreements, trade marks, and royalties from university-generated intellectual property.
- University researchers were issued 227 patents during the past five years.

KANSAS

Kansas State University

- For every state tax dollar spent on KSU, the institution estimates that it generates $19.00 total spending in the state economy.
- The university employs 3,670 people, and its presence generates an additional 8,000 jobs in the area.
- The university spent $427.5 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $140 million in the local economy, students spent $122.7 million, and visitors added another $32.5 million.
- Sponsored research projects brought in $58.5 million in 1999.
- The university generated $62.5 million in tax revenue in 1999.
- Over the past five years, the university and/or its researchers received 40 patents.
- During the past decade, 12 companies employing 120 people were created by faculty and/or others in the area as a result of university-generated intellectual property. Some $4 million in spending was generated by these new companies.
- Seven in 10 graduates remain in Kansas for a significant period of time after receiving their degrees.

University of Kansas

- For every state tax dollar spent on the university, which employs 11,000 people, the institution generates a total of $8.79 in the Kansas economy.
- Competitive grants and contracts contributed $123.5 million to the university's budget in fiscal 1999.
- Fiscal 1999 research funding at UK created approximately 6,800 jobs that pay above the state's average salary.
- In the past five years, the university received almost $3.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property. The university and/or its researchers received 30 patents.
- During the same period, 19 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- The university spent almost $381 million in fiscal 1997 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $251 million in the local economy, students spent $183.4 million, and visitors added another $141.4 million.
- The university generated $123.4 million in tax revenue in fiscal 1997.
- Three in four graduates remain in Kansas after receiving their degrees.

Wichita State University

- The university employs 2,075 people, and its presence generates an additional 1,038 jobs in the area.
- Sponsored research activity totaled $21.2 million in fiscal 2000.
- In the past five years, the university received $30,000 in income from technology-licensing agreements and royalties from university-generated intellectual property. Three patents also were received during this time.
- During the past five years, 2 companies and 10 positions were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Expenditures by the university in fiscal 1996 for supplies, materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation, totaled $126.6 million.
- Students spent $58.8 million in fiscal 1996, and visitors contributed another $12.4 million to the economy.
- More than nine in ten graduates remain in Kansas after receiving their degrees.

For more information, see *Economic Impact of Wichita State University, FY 1996.*

KENTUCKY

Kentucky State University

- The university generated $1.1 million in tax revenue in 2000.
- The university spent $7.4 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees contributed $12.5 million to the local economy.
- During the past five years, 25 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.

Northern Kentucky University

- Located 8 miles from downtown Cincinnati, Northern Kentucky University is integral to the regional economy of northern Kentucky, southwestern Ohio, and southeastern Indiana.
- The university employs 1,800 people, and its presence generates an additional 11,332 jobs in the metropolitan area.
- Sponsored research activity totaled $4.5 million in fiscal 2000.
- The university generated $11 million in tax revenue in 1999.
- The university spent $14 million in 1998 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $34.5 million in the local economy, students spent $121 million, and visitors added another $5 million.
- During the past 10 years, 150 jobs were generated by businesses located in university research parks or by business incubators that did not rely on university-generated intellectual property.
- Eighty-five percent of the graduates remain in the metropolitan area for a significant period of time after completing their degrees.

LOUISIANA

Louisiana State University System

- For every state tax dollar spent on the LSU system, which has 4,661 employees, the institutions generate $8.00 in total spending in the Louisiana economy.
- LSU spent $354 million in 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees contributed $222 million to the local economy.
- The system attracted $82.8 million in competitive grants and contracts in 1998–99.
- The Louisiana Business and Technology Center is a business incubator that serves more than 300 small business clients annually. In addition, it is home to 27 high-tech companies. Two other research enterprises, the Small Business Development Center and the Louisiana Technology Transfer Office, are located on the LSU campus.
- During the past 10 years, 3,200 jobs have been created by different business incubators and high-tech companies. These initiatives have added $28 million to the state's economy and produced $3.5 million in tax revenue.

Louisiana State University and A&M College

- The university, which has 6,3000 employees, generated $41 million in tax revenue in 1999–00.
- During the past 10 years, 29 companies employing 180 people were created by faculty and/or others in the area as a result of university-generated intellectual property. In addition, 3,000 jobs were generated by businesses, located in university research parks, that did not rely on university-generated work.
- Additional spending of $150 million was generated by these new companies during the past 10 years.
- In the past five years, the university has received $5.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, 135 patents were received.
- The university spent $206 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $194 million in the local economy, students spent $228 million, and visitors added another $65 million.
- Sponsored research projects brought in $94 million.
- Seven in 10 graduates remain in Louisiana for a significant period of time after receiving their degrees.

Southern University and A&M College System

- Sponsored research activity totaled almost $20 million in 1999–00.
- The university, which employs 1,588 people, spent $46.8 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent another $54.5 million in the local economy.
- The university generated $1.7 million in tax revenue in 1999.
- About two in three graduates remain in Louisiana after receiving their degrees.

University of New Orleans

- For every $1 the state invests in the university, $6 additional of spending is generated in the state's economy.
- The university employs 2,860 people, and its presence generates an additional 3,912 jobs in the local economy.
- The institution generated $16.1 million in tax revenue in fiscal 1999–2000.
- UNO spent $162.7 million that year; employees spent $100.8 million, students spent $13.2 million, and visitors added another $22.2 million.
- Grants and contracts added nearly $32.9 million to the university's budget in 1999–2000. One patent was received that year and five patents were received during the past five years.
- The university received $30,000 from technology-licensing agreements and royalties from university-generated intellectual property in 2000 and has received $100,000 over the past five years.
- Over the past five years, nearly 7,000 jobs were generated by business incubators or businesses in university research parks not relying on university-generated work.
- Spending of more than $1 billion was generated in the local and state economies by these companies and business incubators. Some $146.3 million in state and local tax revenues were generated by these initiatives.
- 75 percent of graduates remain in Louisiana after they receive their degrees.

MARYLAND

Towson University

- The university employs 2,750 people, and its presence generates an additional 477 jobs in the area.
- The university spent $81.4 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $42 million in the local economy, students spent $66.6 million, and visitors added another $1.4 million.
- In 1998–99, the university generated $5 million in tax revenue.
- Towson University received $14 million from competitive grants and contracts in 1999–00.

University System of Maryland

- As a direct result of graduates' increased earnings and of the dollars brought into the state by the USM, the state treasury gets back $1.74 for every dollar it invests in the USM.
- When combined with the economic impact of the total USM operating budget, the increased earnings and imported dollars result in $5.6 billion in economic activity and $816 million in tax revenue each year in Maryland.
- The incremental income of a representative USM graduating class makes an average annual contribution of $20.9 million to Maryland's tax collections.
- The return to the state in terms of enhanced tax collections directly from its investment in the USM is 5.1 percent.

For more information, see *The Economic Impact of the University System of Maryland: A Fiscal Perspective, 1998.*

University of Maryland, Baltimore County

- For every state tax dollar spent on the university, the institution generates $7.70 total spending in the state economy.
- The university employs 1,963 people and spent $234 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $59 million in the local economy, students spent $5 million, and visitors added another $400,000.
- UMBC received $63.6 million from competitive grants and contracts in fiscal 2000.

- In the past five years, the university has received $192,462 in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, 25 patents were received by the university and/or university researchers.
- During the past 10 years, 2 companies employing 18 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, approximately 378 jobs were generated by businesses located in university research parks or business incubators not relying on university-generated work.
- About five in six graduates (84 percent) remain within the state after receiving their degrees.

University of Maryland, College Park

- For every state tax dollar spent on the university, the institution generates $8.00 in total spending in the state economy.
- The university, with 11,321 employees, spent $978 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $307.6 million in the local economy, students spent $207 million, and visitors added another $24 million.
- The university generated $99.8 million in tax revenue in 1999.
- $284 million was received in fiscal 2000 from competitive grants and contracts.
- University researchers were issued 64 patents during the past five years. During the same period, the university received about $10 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 14 companies were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, approximately 852 jobs were generated by businesses located in university research parks or business incubators not relying on university-generated work.
- At least three in five graduates remain in the state for a significant period of time after degree completion.

MASSACHUSETTS

Massachusetts Institute of Technology

- MIT graduates have founded 4,000 firms which, in one year alone, employed at least 1.1 million people and generated $232 billion in worldwide sales. In Massachusetts, 1,065 MIT-related companies employ 125,000 people and generate $16.7 billion in sales. These companies represent five percent of the state's total employment and 10 percent of the state's economic base. MIT-related firms account for about 33 percent of all software sales in the state.
- The university received $732 million in competitive grants and contracts in 2000.
- MIT, with 8,398 employees, spent $1.3 billion in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $440 million in the local economy, and students contributed $100 million.
- The institution's operations generated an estimated $162 million is the tax revenue in fiscal 1999.
- University researchers were issued 143 patents during fiscal 1999.
- About 20 percent of the graduates remain in Massachusetts after receiving their degrees. The average starting salary for graduates of the class of 2000 was $45,000.

For more information, see *MIT Graduates Have Started 4,000 Companies Creating 1,100,000 Jobs and $232 Billion in Sales, 2000; Average Starting Salary for MIT Grads Tops $45K, 2000; Technology Licensing Office Statistics for Fiscal Year 1999; MIT: The Impact of Innovation.*

University of Massachusetts System

- The University of Massachusetts system has 12,880 employees; an additional 13,000 jobs are generated within the state because of the presence of the institutions.
- In the past five years, the university system has received $15.1 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- University researchers were issued 125 patents during the past five years.

- During the past ten years, 42 companies employing 1,010 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, during the past five years approximately 140 jobs were generated by businesses in university research parks or business incubators not relying on university-generated work.
- $200 million was received from sponsored research projects in 1999.
- The university system spent $436 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University system employees spent $550.6 million in the local economy; students contributed $231 million; and visitors added $11.7 million.
- The university system generated $137 million in tax revenue in 1999.
- About three in five of the graduates of UM system institutions have remained within Massachusetts after receiving their degrees.

University of Massachusetts, Amherst

- The university has 5,552 employees and its presence generates an additional 10,000 jobs in the area.
- For every state tax dollar spent on the university, the institution generates $3.83 total spending in the state economy.
- In the past two years, the university has received 9 patents and about $200,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 40 companies employing 1,000 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- The university received $79.5 million from sponsored research projects in 2000.
- The university generated $55.5 million in tax revenue in 1999.
- University employees spent $233.5 million in the local economy, students contributed $200 million, and visitors added $10 million.
- 56 percent of the graduates remain in Massachusetts after receiving their degrees.

University of Massachusetts, Boston

- The university employs 1,300 people, and its presence generates an additional 2,000 jobs in the area.
- For every state tax dollar spent on the university, the institution generates $2.20 total spending in the state economy.
- The university spent $163.8 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent almost $65 million in the local economy, and students spent $40.8 million.
- The university generated $4.3 million in tax revenue in 1999.
- Sponsored research projects brought in $18.2 million.
- Nine in ten graduates remain in Massachusetts for a significant period of time after receiving their degrees.

MICHIGAN

Michigan State University

- The university employs 12,985 people, and its presence generates an additional 12,000 jobs in the area.
- The university generated $104 million in tax revenue in 1999–00.
- MSU spent $1 billion in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $463 million in the local economy, students spent $273 million, and visitors added another $34 million.
- MSU received $156.7 million from competitive grants and contracts in 1999–00.
- In the past five years, the university received $89.7 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, in the past five years 216 patents were awarded to the university or university researchers.
- During the past 10 years, 24 companies employing 300 people were created by faculty and/or others in the area as a result of university-developed intellectual property. During the same period 90 jobs were generated by businesses located in university research parks or business incubators not relying on university-generated work.

MAKING A DIFFERENCE

A **Wayne State University** engineering professor and his graduate-student research team study accident patterns at road intersections and then make traffic-safety recommendations that are saving both lives and dollars. Tapan Datta and his team already reduced the accident rate by 45 to 60 percent at the first three Detroit road intersections they targeted; their changes are estimated to have saved more than $1 million in insurance claims. The project, funded through the state and conducted jointly with the Automobile Association of America (AAA Michigan) and the city of Detroit has expanded to encompass about three dozen Detroit intersections. Datta says his fixes are easy and low-cost. His research team conducts in-depth analysis of accident patterns and on-site driver behavior and then makes such recommendations as using larger traffic signals, resetting signal timing, and providing left-turn lanes and improved pavement markings.

- Additional spending of $480,000 was created by these new companies and business incubators associated with the university during the past decade. Some $180,000 was generated in state and local tax revenues from these initiatives.
- Almost seven in ten of the graduates remain in Michigan for a significant period of time after receiving their degrees.

Michigan Technological University

- The university employs 1,429 people, and its presence generates an additional 4,800 jobs in the area.
- For every state tax dollar spent on the university, the institution generates $1.96 total spending in the state economy.
- The university spent almost $93 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $40 million in the local economy, students spent $21 million, and visitors added another $411,000.
- The university generated $2.7 million in tax revenue in 1999.
- Sponsored research activity brought in $22.8 million in fiscal 1999.
- During the past five years, 14 patents were accepted, and $531,278 was received in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Slightly more than half of the graduates (55 percent) remain in Michigan for a significant period of time after completing their degrees.

Wayne State University

- The university, with 7,978 employees, generated $59 million in tax revenue in 1999.
- The university spent $567 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $151.4 million in the local economy, students spent $115 million, and visitors added another $6.3 million.
- Sponsored research projects brought in $100 million in 1999.
- During the past five years, the university or university researchers received 56 patents.
- In the past five years, the university received $2.4 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 5 companies employing 30 people were created by faculty and/or others in the area as a result of university-generated intellectual property.

- More than nine in ten graduates remain in Michigan for a significant period of time after receiving their degrees.

Western Michigan University

- The university employs 3,344 individuals, and its presence generates an additional 5,016 jobs in the area.
- University researchers were issued 10 patents during the past five years.
- Competitive grants and contracts contributed $32.5 million to the university's budget in 1999.
- The university spent $267.8 million in 1997 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $91.7 million in the local economy, students spent $204.4 million, and visitors added another $21.7 million.
- The university generated $5.8 million in tax revenue in 1997.
- Seven in ten graduates remain in Michigan for a significant period of time after receiving their degrees.

MINNESOTA

University of Minnesota

- The university employs 16,613 people, and its presence generates an additional 12,000 jobs in the area.
- The university generated almost $178 million in tax revenue in fiscal 2000.
- The university also brought in $360 million in competitive grants and contracts in fiscal 2000.
- The university spent $700 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses.
- University employees spent $729 million in the local economy, students spent $363 million, and visitors added almost $463 million.
- During the past five years, 32 companies were created by faculty and/or others in the area as a result of university-generated intellectual property. In addition, 221 patents were received during the same period.
- In the past five years, the university received almost $45 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- The economic impact of university research affects residents across the state. For example, UM has developed 80 percent of the seed stock used by Minnesota's farmers. UM has contributed significantly to the iron ore mining industry and played a key role in the development of Minnesota's medical device industry. For example, the research that led to the first heart pace makers and the founding of Medtronic was done by Earl Bakken, at UM.
- Approximately 80 percent of residents and 40 percent of nonresident students remain in Minnesota for a significant period of time after receiving their degrees.

University of Minnesota-Duluth

- The institution employs 1,980 people, and its presence generates an additional 3,168 jobs in the area.
- For every state tax dollar spent on the University of Minnesota-Duluth, the institution generates $3.00 total spending in the state economy.
- During the past ten years, 7 companies employing 59 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of almost $7 million was created by these new companies and business incubators associated with the university during the past 10 years. Some $2 million was generated in state and local tax revenues from these initiatives.
- In the past five years, the university has received $1 million in income from technology-licensing agreements and royalties from university-generated intellectual property. During that period the university and/or its researchers were awarded 3 patents.
- The university generated $51.6 million in tax revenue in 1999.
- The university spent almost $113 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $44.8 million in the local economy, students spent almost $51 million, and visitors added another $5.3 million.

- The institution brought in $12.4 million in competitive grants and contracts in 1999.
- Almost nine in ten graduates remain in Minnesota after receiving their degrees.

MISSISSIPPI

Mississippi State University

- The university employs 4,349 people, and its presence generates an additional 900 jobs in the area.
- The university brought in $107 million in competitive grants and contracts in 1999–2000.
- In addition, MSU generated $5 million in tax revenue in 1999.
- The university spent almost $63 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenses. University employees spent $123 million in the local economy.
- During the past five years, 35 patents were received by the university and/or its researchers. In addition, during that period the university received $280,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 6 companies employing 36 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, during the past five years 70 jobs were generated by businesses located in university research parks not relying on university-generated work.
- Additional spending of almost $3 million was created by these new companies and business incubators associated with the university during the past five years. Some $300,000 was generated in state and local tax revenues from these initiatives.

MISSOURI

Lincoln University

- For every state tax dollar spent on the university, the institution generates $2.52 total spending in the state economy.
- Lincoln University employs 450 people, and its presence generates an additional 600 jobs in the area.
- The university generated $1.6 million in tax revenue in 1999.
- It is estimated that 90 percent of employers in Cole County have employees who graduated from or attended Lincoln.
- The total impact of Lincoln University on Cole County exceeded $198 million in 1999.
- Competitive grants and contracts contributed $3.2 million to the university's budget in fiscal 2000.
- The university spent almost $26 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $13.2 million in the local economy, students spent almost $17 million, and visitors added another $1 million.
- As part of the university's outreach efforts, it helps to provide training to local residents to make them more productive workers and citizens. Some recent examples include instruction in computers, management and business training, teacher training, nursing and health instruction. The collective value of the time spent by students, faculty, and staff in volunteer efforts was $1.8 million.
- More than nine in ten of the graduates remain in Missouri after receiving their degrees.

For more information, see *The Economic Impact of Lincoln University (Missouri) on Its Local Community, 2000.*

University of Missouri-St. Louis

- The Center for Emerging Technologies supports the creation of high-growth, advanced technology companies that provide high-paying jobs. Recently, a 42,000 square-foot warehouse that had been abandoned was rehabilitated and turned into the Center's incubator facility. This required an investment of $6.5 million from public and private sources. Currently, operating resources and earned revenues total almost $1 million annually.
- Analysis indicates that between the activity in the current incubator building and the projected 140 jobs created in another facility, in the next 20 years the total effort will generate $1.22 billion for Missouri's economy and $172 million for the St. Louis area. It will add $861 million to households in the state and $91 million to households in the city. At least another 750 jobs are expected to be created across the state, including 500

additional positions in St. Louis.

For more information, see *Strategic Business Plan: 2000–2004.*

MONTANA

University of Montana-Missoula

- During the past five years, 4 companies employing 10 people were created by faculty and/or others in the area as a result of university-developed intellectual property. Additional spending of $250,000 was created by these new companies, and $20,000 was generated in state and local tax revenues from these initiatives.
- In the past four years, the university has received $292,000 in income from technology-licensing agreements and royalties from university-generated intellectual property. Six patents were received during this period.
- The university has approximately 2,000 employees and generated $2.9 million in tax revenue in fiscal 1999.
- Competitive grants and contracts contributed almost $23 million to the university's budget in fiscal 1999.
- The university spent $149 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $53.5 million in the local economy, students spent $107 million, and visitors added another $32.4 million.

For more information, see *The Discovery Continues: The University of Montana President's Report, 1999; Town and Gown: The Economic Partnership Between The University of Montana and Missoula, 1997;* and *Estimated University of Montana-Related Expenditures in Missoula County, 1998–99.*

NEBRASKA

University of Nebraska (System)

- The University of Nebraska system employs 13,940 people, and its presence generates an additional 16,470 jobs in the area.
- For every state tax dollar spent on the university system, the institution generates $9.00 total spending in the state economy.
- Estimated total economic impact of the system was more than $3 billion in 1998–99.
- An estimated $105 million in state and local taxes were paid in 1998–99 by businesses and individuals who directly and indirectly benefited from university activities.
- Competitive grants and contracts contributed more than $150 million to the university system's budget in 1999.
- The University of Nebraska spent more than $1 billion in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- During the past five years, 93 patents were received by the university and/or its researchers.

NEVADA

University of Nevada, Reno

- The university employs 5,708 people, and its presence generates an additional 5,080 jobs in the state.
- For every state tax dollar spent on the university, the institution generates $1.84 total spending in the state economy.
- During the past 10 years, 25 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- University researchers were issued 11 patents during the past five years.
- The university spent almost $152 million in 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $154 million in the local economy, and students contributed $83 million. Visitors added another $24.5 million.
- The university generated $14.5 million in tax revenue in 1999–00.
- Competitive grants and contracts contributed almost $81 million to the institution's budget in 1999–00.
- Three in five graduates remain in Nevada after graduation.

NEW JERSEY

Montclair State University

- For every state tax dollar spent on the university, the institution generates $2.31 total spending in the state economy.
- The university employs 1,679 people, and its presence generates an additional 3,247 jobs in the area.
- The university generated almost $17 million in tax revenue in 1999.
- The university spent $28.7 million in 1999 on supplies, materials, equipment, acquisition,

maintenance, and other institutional expenditures.

- University employees spent almost $45 million in the local economy, and students spent $11.6 million.
- Sponsored research projects contributed $2.6 million to the university's budget in1999.
- Two in five graduates remain in New Jersey for a significant period of time after receiving their degrees.

Rutgers, The State University of New Jersey

- Through direct and indirect spending, Rutgers—with 6,100 employees—channels more than $2.2 billion into the state economy each year.
- For every state tax dollar spent on the university, the institution generates $6.40 total spending in the state economy.
- During the past 10 years, 64 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- In the past five years, the university has received $20.3 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, 108 patents were received by the university and/or its researchers.
- Rutgers is active in several high-technololgy areas:
  - With a grant from the National Science Foundation, Rutgers and four other universities are establishing the mid-Atlantic region's central Internet2 connection to the national network.
  - Rutgers researchers are pioneering the development of small, highly sophisticated radio transmitters that will make accessing the Internet and performing other complex computing functions through remote access easy and fast.
  - Engineers at the Malcolm G. McLaren Center for Ceramic Research are testing technologies capable of safely encapsulating high-level radioactive waste. Safe storage represents a potential multibillion-dollar industry.
  - Combining the university's strengths in food science and pharmacology, Rutgers is developing a major initiative in nutraceuticals, the study of compounds derived from foods that have implications for human health. Recent findings include the discovery that chemicals found in green tea, turmeric, and rosemary inhibit the expression of two cancer-promoting genes.
- The university received $166 million in 1999 in competitive grants and contracts.
- The university spent $770.3 million in 1998 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. It generated $154 million in tax revenue.
- University employees spent $335 million in the local economy, students spent $316.4 million, and visitors added another $10 million.
- Rutgers is a national leader in integrating service learning into the undergraduate curriculum with its Citizenship and Service Education program. From 1989 to 1998, 7,200 students participated in the program, providing 425,000 hours of community service.
- On average, Rutgers faculty members devote approximately 20 percent of their time per week to community service and outreach activities.
- 60 percent of the graduates remain in New Jersey after receiving their degrees.

For more information, see *Engaging the Community: Rutgers' Contributions to the Economic and Civic Vitality of New Jersey and Beyond, 1999.*

MAKING A DIFFERENCE

How to dispose of dangerous, high-level radioactive waste has challenged scientists since the advent of nuclear power and military-weapons production. Now, research under way at the **Rutgers Center for Ceramic Research** may lead to a solution for this global problem. The Rutgers center is testing new technology for creating thick-walled ceramic casks designed to safely encapsulate radioactive waste. The technology was developed by NUCON Systems Inc., a New York Company that is paying Rutgers $500,000 for the research on the ceramic's resistance to radiation. Researchers envision a multi-billion-dollar market for any company that develops a safer long-term storage option for radioactive waste.

NEW MEXICO

New Mexico State University

- For every state tax dollar spent on New Mexico State University, the institution generates $1.87 total spending in the state economy.
- The university employs 4,251 people, and its presence generates an additional 12,961 jobs in the area.
- During the past 10 years, 4 companies employing 74 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 104 jobs were generated by businesses located in university research parks not relying on university-generated work.
- In the past five years, the university has received $139,257 in income from technology-licensing agreements and royalties from university-generated intellectual property. University researchers were issued 10 patents during the same period.
- NMSU generated $7.6 million in tax revenue in 1999.
- The university spent $337.4 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. It received $98 million in competitive grants and contracts the same year.
- University employees spent $119.4 million in the local economy, students spent $121.2 million, and visitors added another $11.5 million.
- Almost half of the graduates (45 percent) remain in New Mexico after receiving their degrees.

NEW YORK

University at Binghamton, State University of New York

- In fiscal 1998–99, the total impact of economic activity within the region as a result of the direct and indirect expenditures of the university and its students was over $386.6 million.
- For every state tax dollar spent on the university, the institution generates $4.40 total spending in the state economy.
- Over 8,400 full-time equivalent jobs are created and supported directly or indirectly in the local community from the university's economic activity. This number includes 2,313 such positions on campus.
- The university spent $120 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects brought in $20 million.
- The university generated $11 million in tax revenue in 1999.
- University employees spent almost $93 million in the local economy. This generates a regional economic impact of $156.4 million.
- Students spent $33.6 million; the regional impact is estimated to be $75.4 million.
- Visitors contributed another $2.5 million locally, which produced a regional impact of $5.6 million.
- Construction projects scheduled during the next eight years will bring $485.9 million to the regional economy, including 7,688 construction jobs.
- Schools, hospitals, nursing homes, ambulance services, museums, governmental and political offices, and other organizations benefit from volunteer hours donated by students, faculties and staff. More than 300,000 hours were documented for 1998-99. This would convert to a salary and wage cost of approximately $3 million.
- In the past five years, the university has received $100,000 in income from technology-licensing agreements and royalties from university-generated intellectual property. Seven patents were received.
- Half of the graduates remain in New York state for a significant period of time after receiving their degree.

For more information, see *Binghamton University Contributing to the Local Economy 1998–99, 2000.*

University at Albany, State University of New York

- The university will generate more than $7 billion in the state's economy over the next 10 years (2000–2010). The total operating budget is $229 million, and the state appropriation is $46 million.
- The University at Albany employs more than 4,500 people and is the fourth largest employer in the region outside of the state government. Nearly 10,000 permanent jobs in New York State are tied to the university, and the capital improvement program will yield more than 5,400 temporary jobs for the region over the next 10 years.
- During the past decade, the university's Small Business Development Center has created or saved 2,191 jobs and counseled 6,447 entrepreneurs.

- Over the past five years, 14 patents were received and $872,395 was received in income from technology-licensing agreements and royalties from university-generated intellectual property.
- The university spent $131 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees spent almost $144 million in the local economy.
- In FY 97–98, university faculty received almost $123 million in total research funding. Federal research awards have more than tripled since 1991, growing to $99 million of the total. Federal, state, and industry funding supports cutting-edge research at more than 50 centers and institutes, including:
  - *The Atmospheric Sciences Research Center.* Recognized internationally for its pioneering work in cloud-seeding experiments, the center annually averages $4 million in external funding for research in atmospheric chemistry, global climate change, ozone and acid rain.
  - *The Center for Social and Demographic Analysis.* Funded by a $2.5 million grant, this center supports some of the country's top demographers who are working on the year 2000 census.
  - *The Center for Technology and Government.* By applying new technologies to help public sector agencies function more efficiently, the CTG has saved state taxpayers more than $3 million since its inception in 1993 and attracted $6 million in grants and in-kind contributions.
  - *The Hindelang Criminal Justice Research Center.* This center conducts research and develops policy recommendations. It has generated $1.8 million per year in external funds for the last 10 years, working on projects such as child abuse, domestic violence, and violence intervention.
- A four-year degree from the university can increase the earnings of the average high school graduate by more than $18,000 per year; an advanced degree can increase average earnings by more than $40,000 per year.
- Three in five graduates remain in New York after receiving their degrees.

For more information, see *Economic Impact of the University at Albany, 1998,* and *University at Albany: $7 Billion Impact on the New York State Economy 2000–2010.*

University at Buffalo, State University of New York

- The University at Buffalo continues to have a dramatic effect on the economic health of western New York state, with the total regional economic impact estimated at more than $1.41 billion in FY 96.
- In addition to 5,000 positions on campus, about 8,000 additional jobs were generated in the community. UB now ranks as the region's fifth largest employer.
- In 1995-96, UB had total expenditures of $637.2 million. Of this, 85 percent, or $541.6 million, was spent in western New York state.
- UB students spent $136 million in the Buffalo area (in addition to tuition and fee payments). Visitors contributed an additional $10 million.
- In the past five years, the university has received $1.1 million in income from technology-licensing agreements and royalties from university-generated intellectual property. During the same period, 89 patents were received.
- During the past 10 years, 9 companies employing 151 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 384 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional spending of $367 million was created by these new companies and business incubators associated with the university during the past eight years.
- Competitive grants and contracts contributed almost $80 million to the university's budget in 1999–00.
- The UB School of Management Center for Entrepreneurial Leadership strengthens regional economic development by helping established firms grow (thereby increasing employment levels), expanding the flow of resources into the economy, and enhancing the tax base of the western New York area.
- Through the Center for Industrial Effectiveness (TCIE), the university is working with management and union teams to make

their businesses more efficient and, consequently, jobs more secure. Since its founding in 1987, TCIE has helped some 300 firms improve their production methods, hone their management techniques, outmaneuver their competition, and bolster their market share.

- Through the University Community Initiative, UB staff, community leaders and individual citizens have joined together to revitalize neighborhoods surrounding the South Campus.
- More than nine in ten graduates remain in New York after receiving their degrees.

For more information, see *University at Buffalo: Facts, 2000.*

University at Stony Brook, State University of New York

- For every state tax dollar spent on the university, the institution generates $3.84 total spending in the state economy.
- The university employs 10,265 individuals, and its presence generates an additional 500 jobs in the area.
- The institution's regional economic impact was estimated at $2.5 billion in 1997–98.
- University-generated revenues are now close to $1.05 billion.
- Competitive grants and contracts contributed $122 million to the university's budget in 1999–00.
- During the past five years, 12 companies employing 50 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 700 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional revenues of $15.5 million were generated by the new companies and business incubators associated with the university during the past five years.
- The university received more than $48.2 million over the past five years in income from technology-licensing agreements and royalties from university-generated intellectual property. The university and/or its researchers have received 104 patents during the same period.
- In addition, through a number of business development programs, Stony Brook provides technical, financial, strategic, and marketing expertise to new and growing companies. In the past decade, five successful economic development programs have been started, which have added several thousand new jobs and more than $180 million in business volume. They include:
  - *The Small Business Development Center,* which provides free counseling on business plans, sales prospects, management, securing funds, etc., for those intending to start small business enterprises or expand existing ones. Since its inception 10 years ago, the center has helped to save 671 jobs and has created 1,814 new positions. The overall level of investment in these activities is estimated at $77.7 million.
  - *The Center for Biotechnology,* which is funded by the New York State Science and Technology Foundation in partnership with the University at Stony Brook and supports innovative biomedical research projects in cooperation with the biotechnology industry. Approximately 1,500 jobs have been created since the center began.
  - *The Strategic Partnership for Industrial Resurgence,* which was established to use the engineering resources of the SUNY system to help industries in New York compete more effectively. By 1998, 129 projects had developed involving 66 companies, and 1,100 jobs had been created.
  - *The Long Island High Technology Incubator,* which is self-sustaining with a $1 million annual budget. Its purpose is to provide space for initial product research and development for tenants associated with university projects and for people working on research projects off-campus. Its campus tenants have about 100 employees.
  - *The Center for Agile Sources of Parts,* begun in 1996 to supply hard-to-find spare parts used by the Armed Services. As a result of this program, the Department of Defense has purchased over $18.3 million worth of spare parts from Long Island companies.

- Four in five graduates remain in New York for a significant period of time after receiving their degrees.

  For more information, see *The Economic Impact of Stony Brook, 2000.*

NORTH CAROLINA

North Carolina A&T State University

- The university employs 2,000 people, and its presence generates an additional 1,800 jobs in the area.
- The university spent $130 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $60 million in the local economy, students spent $20 million, and visitors added another $2 million.
- Competitive grants and contracts contributed $30 million to the university's budget in 1999.
- The university generated $14 million in tax revenue in 1999.
- During the past decade, several companies employing a total of 10 people were created by faculty and/or others in the area as a result of university-developed intellectual property. Additional spending of $560,000 was created by these enterprises, and $80,000 was generated in state and local tax revenues.
- In the past five years, the university has received $5,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Three in five graduates remain in North Carolina after receiving their degrees.

North Carolina State University

- North Carolina State University's Centennial Campus is a research and advanced technology institution where university, industry and government partners interact in activities directed toward the solution of contemporary problems. It is located on nearly 1,200 acres adjacent to the main campus and currently has 900 corporate and government employees, 900 university faculty and staff, and 1,400 students. By 2002, it is estimated that there will be 3,000 corporate and government employees, 1,200 university faculty and staff, and 1,600 students. To date, $340 million has been invested in facilities and infrastructure, including the construction of 15 major buildings with 1.3 million square feet of space.
- University programs located on the Centennial Campus have received $35 million annually in government and industry sponsored research support.
- NCSU has 6,331 employees and spent $711 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $240.3 million in the local economy in 1998–99.
- Sponsored research projects contributed $140.4 million to the university's budget in 1999–00.
- In the past five years, the university received $21.5 million in royalties from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past five years, the university and/or its researchers received 149 patents.
- Two in three graduates remain in North Carolina for a significant period of time after receiving their degrees.

  For more information, see *http://centennial.ncsu.edu.*

University of North Carolina at Wilmington

- The university has 1,393 employees and generated $2.7 million in tax revenue in 1999.
- Competitive grants and contracts contributed $12.7 million to the university's budget in 1999–00.
- The university spent $127 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $38.8 million in the local economy, students spent $59.6 million, and visitors added another $119,387.

NORTH DAKOTA

North Dakota State University

- For every state tax dollar spent on the university, the institution generates $3.88 total spending in the North Dakota economy.
- The university has 2,263 employees; an additional 3,333 jobs are generated within the state because of the presence of the institution.

- The recently formed NDSU Research and Technology Park will include a 20,000 square foot business incubator in which emerging companies will work with faculty and students to prepare new products and improved operating procedures. The Small Business Institute already provides consulting services from students at bargain prices, and faculty from the College of Business Administration consult with businesses.
- The university spent almost $105 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects contributed $24.3 million to its budget that year.
- University employees spent $55 million in the local economy; students contributed $65.7 million, and visitors added almost $5 million.
- The university generated $12.2 million in tax revenue in 1999.
- Over the past five years, the university received $3.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property. In addition, 16 patents and 16 plant-variety protections were received.
- About half of the graduates of NDSU remain within North Dakota after receiving their degrees.

University of North Dakota

- The university employs 2,337 people, and its presence generates at least 6,000 additional jobs in the area.
- For every state tax dollar spent on the University of North Dakota, the institution generates $1.96 total spending in the state economy.
- The university generated $95 million in tax revenue in 1999.
- During the past 10 years, 23 companies employing 283 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 96 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during this same period.
- Additional spending of $72 million was created by these new companies and business incubators associated with the university during the past ten years.
- University researchers were issued 6 patents during the past five years.
- The university spent $235.5 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Competitive grants and contracts contributed $40 million to its budget.
- University employees spent $72.8 million in the local economy, students spent $80.3 million, and visitors added almost $4 million.
- About one-third of the graduates remain in North Dakota after receiving their degrees.

For more information, see *Annual Report, Fiscal Year 1999.*

OHIO

Bowling Green State University

- The university generated $11.3 million in tax revenue in 1999.
- For each $1 the state of Ohio invests in Bowling Green, the university generates an additional $2.10 for its operating expenses from other sources.
- Nearly 5,300 jobs in Ohio were attributable to Bowling Green and its direct expenditures in fiscal 1996. The university's estimated in-state purchases of $52 million that year created 2,080 jobs for Ohioans. In addition, the university's capital expenditures of $17.8 million created additional employment for 712 residents.
- Competitive grants and contracts contributed $11.6 million to the university's budget in 1999–2000. New sponsored activities included applied scientific research at the Center for Photochemical Sciences, cooperative international research on atmospheric contaminants, the formation of a vocational-education personal-development center, and cooperative education programs in the College of Technology.
- The university spent $30.6 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $73 million in the local economy, students spent almost $168 million, and visitors added $6.5 million.

For more information, see *Inter-University Council Economic Impact Statement 2000;* and *Ohio's Education Profile, 1996: An Economic Impact Statement.*

Cleveland State University

- CSU generated $4.4 million in tax revenue in 1999.
- 8 patents were received during the past five years.
- The university spent $60 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- Employees spent about $62 million in the local economy.

Kent State University

- For every state tax dollar spent on the university, the institution generates $3.77 total spending in the state economy.
- The university, with 5,456 employees, generated almost $8 million in tax revenue in 1999.
- Kent State University spent $150 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects brought in $27 million.
- University employees spent $117 million in the local economy, students spent $194 million, and visitors added another $15 million.
- During the past five years, researchers were issued 14 patents, and the university received almost $1 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past five years, four companies employing 51 people were created by faculty and/or others in the area as a result of university-generated intellectual property. In addition, 10 jobs were generated by businesses located in university research parks not relying on university-generated work.
- Additional spending of $4.5 million was created by these new companies associated with the university during the past five years. Some $500,000 was generated in state and local tax revenues from these initiatives.
- Three in five graduates remain in Ohio for a significant period of time after receiving their degrees.

Ohio State University

- For every state tax dollar spent on Ohio State University, the institution generates $3.67 total spending in the state economy.
- The university employs 24,261 people, and its presence generates an additional 9,422 jobs in the area.
- The university generated $143.7 million in tax revenue in 1999.
- Competitive grants and contracts contributed $263.4 million to the university's budget in 1999.
- The university spent almost $669 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $374.6 million in the local economy, students spent $439.6 million, and visitors added another $130 million.
- During the past decade, four companies employing 132 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 215 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during this same period.
- In the past five years, the university received $7.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property. During this same period, 103 patents were received.
- Seven in ten graduates remain in Ohio after receiving their degrees.

For more information, see *Economic Impact 2000 Data for the Ohio State University, 2000.*

MAKING A DIFFERENCE

The *Campus Partners* program at **The Ohio State University** focuses on using university expertise and good will to assist the local community through diverse projects that provide a variety of direct and indirect economic benefits for the area. Activities include allowing middle-school students to ride university buses for free following after-school programs; securing federal grants for computer centers and for developing school-to-work curricula for area high schools; and offering job-readiness workshops to low-income people who then are prepared for entry-level jobs at the university. Ohio State also has established a home-ownership incentive program that provides grants to help faculty and staff members purchase homes in the neighborhoods adjoining the university.

Ohio University

- For every state tax dollar spent on the university, the institution generates $4.07 total spending in the state economy.
- Ohio University has 4,571 employees; an additional 8,858 jobs are generated within the state because of the presence of the institution.
- The university generated $24.9 million in tax revenue in 1998–99.
- Some $49 million was received from sponsored research projects in 2000.
- University researchers were issued 30 patents during the past five years.
- The university spent $177 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $132 million in the local economy; students contributed almost $203 million, and visitors added $9.5 million.
- In the past five years, the university has received $1.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, three companies employing 476 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 200 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Seven in 10 graduates remain in Ohio after receiving their degrees.

University of Akron

- For every state tax dollar spent on the university, the institution generates $5.00 total spending in the state economy.
- The university employs 4,333 people, and its presence generates more than 6,000 jobs in the area.
- The university spent $148 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $83 million in the local economy, students spent $195 million, and visitors added another $18 million.
- The university generated almost $14 million in tax revenue in fiscal 2000.
- Sponsored research projects brought in $22 million in fiscal 2000.
- 52 patents were accepted during the past five years, and the university received $1.2 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- About six in seven graduates remain in Ohio for a significant period of time after receiving their degrees.

Wright State University

- For every state tax dollar spent on the university, the institution generates $3.63 total spending in the state economy.
- Wright State, with 2,074 employees, generated $1.7 million in tax revenue in 1998-99.
- The university spent $140.7 million in 1998–99 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $79.2 million in the local economy, students added another $71.5 million, and visitors contributed $1.5 million.
- Sponsored research contributed over $45 million to university coffers in 1999–2000.
- During the past 10 years, three companies employing five people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of $1.5 million was created by these new companies, and $120,000 was generated in state and local tax revenues from these initiatives.
- Recently, the university received $48,471 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past five years, seven patents were received
- 86 percent of WSU's graduates remain in Ohio after receiving their degrees.

OKLAHOMA

Oklahoma State University

- For every state tax dollar spent on the university, the institution generates $4.24 total spending in the state economy.

- The university employs 5,100 people, and its presence generates an additional 500 jobs in the area.
- Oklahoma State University spent $180 million in 1997 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $50 million in the local economy, students spent $139 million, and visitors added another $28 million.
- The university generated $19 million in tax revenue in 1997.
- Sponsored research projects brought in $89 million.
- During the past five years, 30 patents were accepted in the U.S. and abroad.
- In the same period, the university received $595,031 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Three in five graduates remain in Oklahoma for a significant period of time after receiving their degrees.

University of Oklahoma

- For every state tax dollar spent on the University of Oklahoma, the institution generates $2.83 total spending in the state economy.
- The University of Oklahoma has 3,906 full-time employees, and its presence generates an additional 6,400 jobs in the area.
- The university generated $24 million in tax revenue in 1998.
- The university spent almost $468 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $139 million in the local economy, and students contributed almost $215 million.
- Some $92 million was received in competitive grants and contracts in 2000.
- During the past year, 12 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- In the same period, the university has received $110,265 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- 8 patents were received in fiscal 1999.
- Approximately two in three graduates remain in Oklahoma after receiving their degrees.

OREGON

Portland State University

- For every state tax dollar spent on the university, the institution generates $5.70 total spending in the state economy.
- The university generated $40 million in tax revenue in 1999.
- PSU employs 2,134 people, and its presence generates an additional 75 jobs in the area.
- Competitive grants and contracts contributed $24.5 million to the university's budget in 1999.
- Portland State spent $67 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees spent $54 million in the local economy; students contributed $148 million, and visitors spent an additional $2.5 million.
- About half of the graduates remain in the state after receiving their degrees.

PENNSYLVANIA

Pennsylvania State University

- Pennsylvania State University employs 16,800 people, and its presence generates an additional 7,400 jobs in the area.
- The university generated $205 million in tax revenue in 1996–97.
- During the past five years, 24 companies were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 125 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- In the past five years, the university has received $7.1 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- University researchers were issued 135 patents during the past five years.
- Competitive grants and contracts contributed $393 million to the university's budget in 1999–00.

MAKING A DIFFERENCE

A $3 million company formed to develop commercial products arising from three of **Pennsylvania State University**'s most promising meat and dairy-related patents is employing a new approach to technology transfer. By bundling the three related inventions into the same start-up company, creators hope to increase its attractiveness to investors and its potential to create commercially viable products. It is estimated that the three patents—which deal with meat safety, improved rates of farm-animal reproduction, and meat quality—have the potential for hundreds of millions of dollars in sales. Penn State has an equity interest in the company, and the inventors, along with their academic colleges, will benefit from any economic gain from the inventions.

- The university spent $694 million in 1996–97 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $502 million in the local economy, students spent $340 million, and visitors added another $121 million.
- Nearly three in five graduates remain in Pennsylvania after receiving their degrees.

University of Pittsburgh

- For every state tax dollar spent on the university, the institution generates $3.81 in direct expenditures and $6.17 in direct and indirect expenditures.
- The university generated almost $68 million in tax revenue in fiscal 1998.
- The university employs 8,639 people, and its presence generates an additional 17,430 jobs in the area. The UPMC Health System is closely affiliated with the university and has more than 25,000 employees in the region.
- It is estimated that every dollar the university and its employees spend on goods and services generates another 62 cents in local spending. In fiscal 1998, the university spent $138 million on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees spent almost $264 million in the local economy, and students contributed almost $165 million. Visitors added another $17 million.
- Each year, Pitt receives about $260 million in research funds. During the past decade, Pitt ranked among the top recipients of funding from the National Institutes of Health.
- 107 patents were issued to university researchers during the past five years.
- In the past five years, the university has received approximately $10 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 19 companies employing 222 people were created by faculty and/or others in the area as a result of university-generated intellectual property.
- Besides a heavy emphasis on biotechnology and bioengineering, Pitt also has established programs to assist small companies through its Manufacturing Assistance Center and several centers and institutes run by the Katz Graduate School of Business.
- The university participates in several business-development initiatives, including the Advanced Manufacturing Network, Environmental City Initiative, and Biomedical Business Network.

For more information, see *Economic Impact, 1998.*

PUERTO RICO

University of Puerto Rico, Mayaguez Campus

- For every tax dollar spent on the university, the institution generates $4.88 total spending in the regional economy.
- The university has 3,217 employees, and its presence generates an additional 12,274 jobs in the area.
- The university generated $12.7 million in tax revenue in 1999.
- The university spent $36 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects contributed $13.4 million to the university's budget.
- University employees spent $60 million in the local economy, students spent almost $68 million, and visitors added another $2.3 million.

- During the past five years, 5 patents were accepted, and one start-up company was created by faculty and/or others in the area as a result of university-generated intellectual property.
- Slightly more than half of the graduates (54 percent) remain in Puerto Rico for a significant period of time after receiving their degrees.

University of Puerto Rico, Rio Piedras

- The university generated $12 million in tax revenue in 1998.
- The university spent almost $43 million in 1998 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $67.7 million in the local economy.
- Competitive grants and contracts contributed $6.8 million to the university's budget in 2000.

RHODE ISLAND

University of Rhode Island

- The university employs 2,483 faculty and staff.
- It spent $274 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- Competitive grants and contracts contributed $46 million to its budget in 1998–99.
- University researchers received 19 patents during the past five years.
- In the past five years, the university has received $4.8 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, four companies employing 18 people were created by faculty and/or others in the area as a result of university-developed intellectual property.

SOUTH CAROLINA

University of South Carolina

- For every state tax dollar spent on the University of South Carolina, the institution generates $7.78 total spending in the state economy.
- The University of South Carolina employs 13,041 people, and its presence generates an additional 9,300 jobs in the area.
- The university spent $820 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Competitive grants and contracts contributed $97 million to the university's budget.
- University employees spent $294.7 million in the local economy, and students added another $254.2 million.
- In the past five years, 23 patents were received, and the university has obtained $800,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past five years, four companies employing 21 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 70 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- Additional spending of $7.6 million was created by these new companies and business incubators associated with the university during the past five years. Some $480,000 was generated in state and local tax revenues from these initiatives.

SOUTH DAKOTA

South Dakota State University

- For every state tax dollar spent on South Dakota State University, the institution generates $4.35 total spending in the state economy.
- The university employs 2,033 people, and its presence leads to an additional 14,850 jobs in the area.
- The university generated $16.2 million in tax revenue in 2000.
- Sponsored research contributed $13 million to the university's budget in fiscal 2000.
- Expenditures by the university in fiscal 1999 for supplies, materials, equipment, acquisition, maintenance, and other institutional improvements, including spending on construction and renovation, totaled $117.4 million.
- In 1999 university employees spent $44.3 million across the state, students spent $39.3 million, and visitors contributed another $8 million.

- In the past five years, the university has received $2.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 5 companies employing 37 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Three in five graduates remain in South Dakota after receiving their degrees.

TENNESSEE

Tennessee State University

- Tennessee State University has 1,315 employees, and its presence generates an additional 345 local jobs.
- $23.2 million was received from sponsored research projects in 1999.
- During the past ten years, five companies were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, about 900 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work.
- The university spent $113.4 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $31.8 million in the local economy; and visitors contributed almost $144,000.
- 43 percent of the graduates of the university remain in Tennessee after receiving their degrees.

University of Memphis

- The university spent almost $252 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- Sponsored research projects contributed $33.2 million to the university's budget in fiscal 2000.
- In the past year, the University of Memphis received about $11,700 in income from technology-licensing agreements and royalties from university-generated intellectual property.

TEXAS

Prairie View A&M University

- For every state tax dollar spent on the university, the institution generates $6.44 total spending in the state economy.
- The university, the largest employer in Waller County, employs 1,841 people. An additional 572 jobs are generated due to the university presence.
- The university's 1999–2000 budget of $83.3 million had an estimated overall economic impact of $208 million.
- Competitive grants and contracts contributed $10 million to the university's budget in 1999, including work with NASA's Johnson Space Center to develop computer-software engineering for the International Space Station and the Space Shuttle Program.
- The Cooperative Extension Program annually makes about 138,000 contacts with clients across Texas. Other outreach includes programs sponsored by the College of Agriculture, Nutrition, and Human Ecology, including summer enrichment programs such as the Research Apprenticeship Program and the Minority Apprentice Program.
- During the past 10 years, 25 companies were created by faculty and/or others in the area as a result of university-developed intellectual property.
- The university spent almost $87 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $26.3 million in the local economy, and students contributed $67 million.
- Seven in ten graduates remain in Texas after receiving their degrees.

For more information, see *Prairie View A&M University Facts Booklet, 2000.*

Southwest Texas State University

- For every state tax dollar spent on the university, the institution generates $3.12 total spending in the state economy.
- In addition to the 2,018 positions on campus, more than 6,600 additional jobs are generated in the community.
- The university spent almost $10 million in 1997 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $50 million in the local economy, students spent $146 million, and visitors added another $23 million.

- The university generated $7.3 million in tax revenue in 1997.
- During the past five years, 5 patents were received, and the university obtained about $10,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- Competitive grants and contracts contributed $15.8 million to the university's budget in 1999.
- More than nine in ten graduates remain in Texas after receiving their degrees.

Texas Tech University

- The university employs 4,928 people.
- It spent almost $360 million in fiscal 1999–00 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Competitive grants and contracts contributed $40.7 million to the university's budget.
- University employees spent $69 million in the local economy, students spent $131 million, and visitors added another $12 million.
- In the past year, the university received approximately $200,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.

University of Houston

- The University of Houston employs 7,409 people, and its presence generates an additional 200 jobs in the area.
- The university generated almost $50 million in tax revenue in 1999.
- The university spent almost $366 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $119 million in the local economy, students spent $428.6 million, and visitors added another $45 million.
- Competitive grants and contracts contributed almost $54 million to the university's budget in 1999.
- University researchers were issued 29 patents during the past five years, and the university received $2.5 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past decade, 10 companies employing 100 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of $3 million was created by these new companies and by business incubators associated with the university during the past five years. Some $600,000 was generated in state and local tax revenues from these initiatives.
- Eighty-five percent of the graduates remain in Texas after receiving their degrees.

University of North Texas

- The university generated $13.7 million in tax revenue in 1999.
- North Texas has 2,937 full-time equivalent employees, and its presence generates an additional 10,033 positions in the area.
- Competitive grants and contracts contributed $24.5 million to the university's budget in 1998–99.
- The university spent $279 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $131.4 million in the local economy, students spent $79.3 million, and visitors added another $11.3 million.
- Three patents were awarded during the past five years.

The University of Texas at San Antonio

- The university employs 2,300 people, and its presence generates an additional 4,200 jobs in the area.
- In addition, during the past five years 2,675 jobs were generated by business incubators or businesses located in university research parks that did not rely on university-generated work.
- The university spent $153.7 million in fiscal 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees spent $54 million in the local economy.
- Sponsored research projects brought in $21 million.
- Nine in ten graduates remain in Texas for a significant period of time after receiving their degrees.

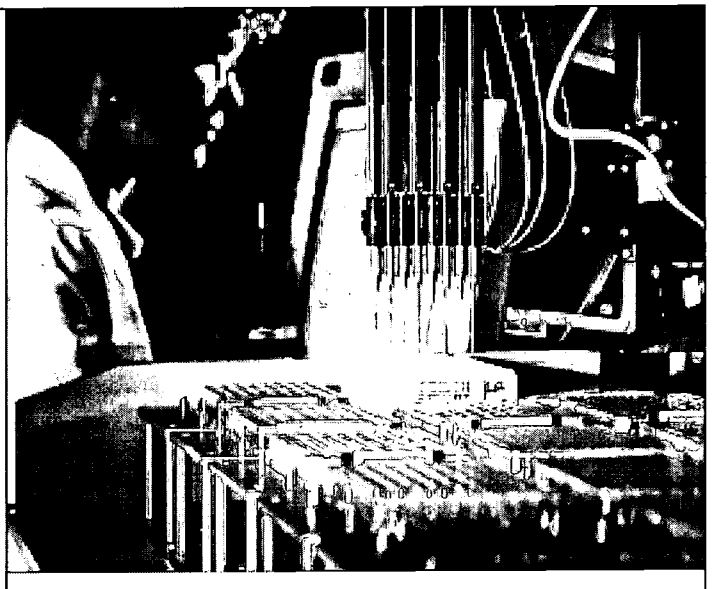
UTAH

University of Utah

- The University's Research Park is located on 320 acres adjacent to the campus. It has 33 buildings housing 37 companies and portions of 35 university departments. The park employs an estimated 6,000 people and contributes approximately $500 million annually to Utah's economy.
- The university, which employs 18,440 people, spent $1.1 billion in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees spent $54 million in the local economy.
- Competitive grants and contracts contributed $225.5 million to the university's budget in FY 2000.
- The university currently has more than 2,100 regular, clinical, and research faculty, who received average individual research awards of more than $91,000 in fiscal 1999. *Science Watch* ranked the impact of clinical research programs at the University of Utah fifth highest in the U.S. In addition, the impact of engineering research was ranked fourth nationally.
- 40 patents were received in fiscal 1999.

For more information, see *University of Utah: About the University, 2000; Discovery, Annual Report for FY 99;* and *University of Utah, Annual Financial Report, 1999.*

MAKING A DIFFERENCE



Myriad Genetics, one of the companies nestled in the **University of Utah**'s 300-acre research park overlooking Salt Lake City, has developed a vital information resource based on genetic information gleaned from large Utah families. Among the disease genes that Myriad has been able to identify are the BRCA1 and BRCA2 breast and ovarian cancer genes, as well as other genes affecting cancer and heart disease. Genetic tests developed by the company allow diagnosis and risk assessment prior to the onset of disease among patients with a family history of a particular illness. The company also is collaborating with pharmaceutical and biotechnology companies to use its genetic research to find practical means for prevention and treatment of disease.

Utah State University

- For every state tax dollar spent on Utah State, the institution generates $3.61 total spending in the state economy.
- The institution employs 3,500 people, and its presence generates an additional 12,702 jobs in the area.
- The university generated $20 million in tax revenue in 1999.
- During the past 10 years, 20 companies employing 153 people were created by faculty and/or others in the area as a result of university-developed intellectual property. In addition, 2,650 jobs were generated by business incubators or businesses located in university research parks not relying on university-generated work during this same period.
- Additional spending of $690 million was created by these new companies and business incubators associated with the university during the past ten years.
- Competitive grants and contracts contributed $141 million in 1999–00.
- University researchers were issued 23 patents during the past five years. During the same period, the university received almost $1 million in

income from technology-licensing agreements and royalties from university-generated intellectual property.

- The university spent $111 million in 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent almost $113 million in the local economy, students spent $176 million, and visitors added another $5 million.
- Seven in ten graduates remain in Utah after receiving their degrees.

VERMONT

University of Vermont

- For every state tax dollar spent on the university, the institution generates $6.57 total spending in the state economy.
- The university employs 3,262 people, and its presence generates an additional 250 jobs in the area.
- The university generated $11.6 million in tax revenue in fiscal 2000.
- The university spent almost $55 million in 2000 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $91 million in the local economy, students spent almost $48 million, and visitors added another $5.6 million.
- Competitive grants and contracts contributed $123 million to the university's budget in 1999.
- During the past year, 5 patents were received, and the university obtained about $300,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.
- One-third of the university's graduates remain in Vermont for a significant period of time after graduation.

VIRGINIA

Virginia Polytechnic Institute and State University

- For every state tax dollar spent on Virginia Tech, the institution generates $5.77 total spending in the state economy.
- The university has 8,038 employees, and the university presence generates an additional 6,806 positions in the surrounding area.
- The university generated $126 million in tax revenue in fiscal 1999.
- The presence of Virginia Tech increases its local county's gross regional product by $521 million, or $16,000 per household. Approximately $1.2 billion in economic activity in the county can be traced to university-related spending.
- During the past decade, 20 companies employing 130 people were created by faculty and/or others in the area as a result of university-generated intellectual property. In addition, 1,000 jobs were generated by businesses located in university research parks not relying on university-generated work during this same period.
- During the past five years, 139 patents were received by the university and/or its employees, and the university has received $5.4 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- The university spent $411 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. Sponsored research projects contributed $169.3 million to the university's budget.
- University employees spent $189 million in the local economy, students spent almost $123 million, and visitors added another $27 million.
- 45 percent of the graduates remain in Virginia for a significant period of time after receiving their degrees.

For more information, see *Virginia Tech and the Community: A Summary of the University's Economic Effects, 2000.*

WASHINGTON

University of Washington

- For every state tax dollar spent on the university, the institution generates $2.13 total spending in the state economy.
- The University of Washington, with 31,801 employees, generated $166.4 million in tax revenue in fiscal 1999.
- Sponsored research projects contributed $625 million to the university's operations in 1999.
- The university spent $2.1 billion in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.

More than 140 start-up companies have been created in the past 50 years based on, or growing out of, research conducted at the **University of Washington**—100 of them in the last decade alone. Today those firms employ more than 7,000 employees and garner over $1.5 billion in revenues in a wide range of technology-related fields. Many of these start-ups are using medical advances, including Phenopath Laboratories, which has developed a Web-based "telepathology" system. Scientists who send Phenopath slides of tissues that require analysis beyond what is available at a standard laboratory then can view those slides online and in "real time" through Phenopath's special, video-equipped state-of-the-art microscope. Phenopath also works with other biotechnology and pharmaceutical companies to identify potential new cancer treatments and testing methods.

- Students spent almost $156 million in the local economy.

WEST VIRGINIA

West Virginia State College

- West Virginia State College has more than 500 employees, and an additional 3,720 positions were generated due to the university presence.
- The institution's economic impact on the local economy was estimated to be over $54 million in fiscal 1994–95. This figure is the sum of the direct and indirect local expenditures ($25.8 million and $28.5 million, respectively). The direct expenditures were the total spending by the college itself ($5.4 million), the staff and faculty ($12.3 million), students ($5.8 million), and visitors ($2.3 million).
- An example of the indirect effects of the college's presence is the estimated $12.6 million that local banks had for loans and other credit-related operations based on the checking and savings accounts maintained by personnel associated with the college.
- Outreach efforts affecting the local economy include a variety of services—including needs assessments, college information sessions, organizational-management training and grant-writing assistance—to residents of six public housing communities and numerous nonprofit organizations in the Charleston, W.Va., metropolitan area.
- The college's Metro Area Agency on Aging, which provides services to senior citizens in 11 counties, identifies the needs of the elderly and helps to meet those needs through a system of in-home and community services, enabling more elderly citizens to maintain their independence.
- Nine in ten of the graduates remain in West Virginia for a significant period of time after receiving their degrees.

For more information, see *The Impact of West Virginia State College on the Kanawha Valley: A Case Study of the Benefits of Higher Education, 1995.*

West Virginia University

- For every state tax dollar spent on the WVU, the institution generates $4.78 total spending in the state economy.
- West Virginia University employs 11,360 people, and its presence generates an additional 6,368 jobs in the area.
- The university generated $26.6 million in tax revenue in 1998.
- Competitive grants and contracts contributed $43.5 million to the university's operations in fiscal 2000.
- The university spent $260 million in 1998 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $173.7 million in the local economy, students spent $134 million, and visitors added almost $6 million.
- In the past five years, 10 patents were received, and the university obtained $150,000 in income from technology-

licensing agreements and royalties from university-generated intellectual property.

- During the past 10 years, five companies employing 51 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- Additional spending of $400,000 was created by these new companies and business incubators associated with the university during the past ten years. Some $20,000 was generated in state and local tax revenues from these initiatives.
- Three in five graduates remain in West Virginia after receiving their degrees.

WISCONSIN

University of Wisconsin-Madison

- The university employs 20,000 people, and its presence generates an additional 67,000 jobs in the area.
- Competitive grants and contracts contributed $420 million to the university's operations in 1998–99.
- During the past five years, 302 patents were received, and the university also received $67.1 million in income from technology-licensing agreements and royalties from university-generated intellectual property.
- During the past 10 years, 108 companies employing more than 420 people were created by faculty and/or others in the area as a result of university-developed intellectual property. Some $10.5 million was generated in state and local tax revenues from these initiatives.
- The university spent $370 million in fiscal 1996 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures. University employees contributed $520 million to the local economy, students spent $441 million, and visitors added another $295 million.
- Two in five graduates remain in Wisconsin after receiving their degrees.

WYOMING

University of Wyoming

- The university employs 1,358 people and generated $503,391 in tax revenue in fiscal 2000.
- Competitive grants and contracts contributed $43 million to the university's operations in fiscal 2000.
- The university spent almost $67 million in fiscal 1999 on supplies, materials, equipment, acquisition, maintenance, and other institutional expenditures.
- University employees spent $135.3 million in the local economy.
- During the past 10 years, nine companies employing 69 people were created by faculty and/or others in the area as a result of university-developed intellectual property.
- University researchers were issued 13 patents during the past five years, and the university received about $140,000 in income from technology-licensing agreements and royalties from university-generated intellectual property.

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August 2001

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